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See Page 15

MODERN TRANSPORT

"THE TIMES" OF THE TRANSPORT WORLD

COMMONS DEBATE ON TRANSPORT

See Pages 2 and 5

VOL. LXXXIV No. 2164 [*Registered at the G.P.O. as a newspaper*] LONDON, NOVEMBER 5, 1960 PRICE ONE SHILLING

CURRENT TOPICS

Another Critic of Road Congestion

SPEAKING at the anniversary luncheon of the Institute of Transport in London on Tuesday, Viscount Tenby, the guest of honour, hesitated to express too strong a view on any subject because he was, as he said, surrounded by a "jam" of present and former Ministers of Transport and their Parliamentary Secretaries. He did feel, however, that it was only reasonable to point out that it had been his father (then Mr. Lloyd George) who, in 1909, had instituted the Road Fund for the purpose of improving the country's highways, a need which he had said was very urgent at that time. It might be said that the need was still urgent and it was not for him on such an occasion to name the one who had been responsible for diverting what had been intended solely for roads to other purposes. The situation showed signs of becoming desperate and it seemed ludicrous that London, which had the best train service in the world, should be entered by what had in his day as Home Secretary been 40,000 cars daily, whereas now it was probably 50,000. When they had reached London the cars were parked and added further to the congestion. He did urge most strongly that such unjustifiable congestion should be reduced by all possible means, while, on another score, he wondered whether the congestion caused by outsize loads was always warranted or whether there was not some other means of moving these. That, perhaps, was a matter which the Institute of Transport could study in furtherance of its general approach to the industry which its members served. The president of the Institute, Mr. K. W. C. Grand, had been so determined to keep to schedule in proposing the toast of the guests, that he had, as he remarked, made his welcome "almost an omnibus one," but he had seized the opportunity to make one or two asides at the expense of political interests pursuing transport matters. All in all the occasion was, as Mr. Grand said, really a birthday party, and it passed in the pleasurable mood of such.

The Retreat of the Pionair

WITH the entry into force of its winter timetable on November 1, British European Airways withdrew from trunk services its Pionair (Douglas Dakota) aircraft, although they will still remain at work for the time being in Scotland and between Southampton and the Channel Islands, as well as in freighter form on a variety of domestic and international routes. A fleet which at one time—in 1952—totalled 50 has now diminished to 15 including Leopard-Pionairs, but it is indicative of the work they have done that it should be possible to credit them with having carried, so far, almost 8,300,000 passengers of the 25,000,000 which B.E.A. has transported in its 14-year history. This substitution by turbine-engined aircraft marks, of course, a significant development in the operation of internal services since not only are the Viscounts faster but they are also of larger capacity. In order to mark the occasion, B.E.A. had arranged for its last scheduled Pionair flight from London Airport on October 31 to be operated by G-AGHS, which is the oldest in its fleet, but the fates took a hand and, in fact, the service was flown by G-AGZB, one of the three machines which pioneered Dakota services on internal routes in Railway Air Services colours. Nor had they finished there for, unfortunately, in landing at Birmingham the runway was overshot and the machine damaged. Something cheerful may, however, be recorded as regards this experience, namely that the behaviour of the B.E.A. crew and particularly the woman flight clerk in this emergency cannot be too highly commended.

An Adventure in Road Planning

YEARS hence, Cumbernauld New Town will be held up as the place in which the motor car came into its own, where it was a pleasure to own one, even to drive it daily to and from one's workplace. That is the dream, nay the confident expectation of the Development Corporation responsible for what is already designated as Europe's first "Motropolis." Earth has already been turned on the first of nine miles of special-purpose roads, the configuration of which will be based on a unique traffic analysis carried out by the Corporation and the Road Research Laboratory. From known social and planning factors it is concluded that within 10 to 15 years from now seven out of ten families will own a car and just over a quarter of all commuters will go by car. About half the working population, however, will still rely on public transport. The road system to cope with all this movement will include access roads to housing areas (they will be deliberately unattractive to through traffic); a ring road encircling the town area to distribute its traffic; and radial motorways connected to the A73 and A80 trunk roads. Grade-separated intersections will be used in preference to roundabouts and walking or parking on the new routes will be prohibited. Nor will they have any building frontages according to present plans. Pedestrians will be completely segregated from vehicular traffic. So Cumbernauld, with its £3½ million roads scheme, hopes to meet squarely the implications of the family car age.

Call for Export Incentives

TWO points made by Mr. John Oldham, chairman, Oldham and Son, Limited, in his customary commentary on world events at the company's 31st annual Motor Show dinner last week, indicated directions in which the Government could and should encourage British exports. Incentives were the things that made industry tick, said Mr. Oldham; the time had come for the exporter to receive better encouragement for his efforts than a tax system which grabbed all the profits of success but let companies themselves carry all the expenses and risks. He called for a Government review now of all aspects of taxation and restrictions on the motor industry. "Some of these were conceived at a time when the depth of world demand and the dearth of world production gave the British motor industry a head start in what was then a seller's market. The question must be asked whether restrictions imposed during that period should be retained in the same form now the industry is having to compete under entirely different conditions overseas." Commenting on the Prime Minister's recent statement that export was fun, Mr. Oldham disagreed; it often involved, he said, long and fatiguing and frustrating journeys and long absences from families and friends and the amenities of home. Over a large field of consumer goods profit margins were small. On the recent easing off in the motor industry, Mr. Oldham said the British manufacturers were experienced and tough enough to fight back, proof of which was to be found in the forward plans of the industry to spend no less than £300 million on development.

Simms Petrol-Injection Development

DEVELOPMENT of the petrol engine may well be about to enter a new phase through the introduction by Simms Motor Units, Limited, of a petrol-injection system that is basically simple and cheap to produce and yet appears to offer similar possibilities of substantially improved engine efficiency as other petrol-injection equipments whose cost and complication have precluded their general commercial acceptance. Although modern carburation is a highly efficient process as a result of some 60 years of development, it still imposes limits on petrol-engine design and has necessitated the development of carefully selected fuels to keep pace with the demand for increased engine performance and economy. The principal advantages to be gained through the use of petrol injection are increased volumetric efficiency, through elimination of the air-intake venturi, and design of intake and valve timing having regard only to maximum air charge, and possibility of further increases in compression ratio without knocking even on present-day fuels. The new Simms equipment, which is described on page 6, is a compact, self-contained unit embodying a number of unique features. Tests so far conducted on standard engines of individual cylinder capacities down to 211 c.c., in which fuel requirements per cycle are as little as 5 cu. mm., indicate improvement in specific fuel consumption of about 16 per cent as well as increased power output without any engine design changes.

Santa Fe Railway and Western Pacific

THE merger movement on United States railways continues apace. The Santa Fe Railway has applied to the Interstate Commerce Commission in Washington for approval to acquire control of the Western Pacific Railroad through purchase and exchange of stock. A block of 20 per cent or 365,000 shares of all outstanding Western Pacific stock is held by Chanslor-Western Oil and Development Company, a wholly-owned subsidiary of the Santa Fe. If the I.C.C. approves the application, Western Pacific shareholders will be offered 1¼ shares of Santa Fe common stock in exchange for each share of Western Pacific stock. Santa Fe Railway intends to maintain existing services, routes, interchange points and general traffic arrangements, as well as competitive solicitation of traffic via Western Pacific. The Santa Fe began serving the San Francisco Bay region at the turn of the century, and its entry into the area provided essential additional rail service which it is no exaggeration to say materially assisted in the growth and development of the state of California. With the state now one of the fastest-growing areas of the American continent, the need for competitive and efficient rail service is probably more pressing than it was half-a-century ago. The vast network of Southern Pacific lines in central California and the Bay area many years ago underlined the advisability of the Santa Fe and Western Pacific working together to present some measure of competition to Southern Pacific's coverage of the area. This resulted in the Santa Fe and Western Pacific each acquiring a half interest in the Alameda Belt line and the Oakland Terminal Railway, in Oakland, as well as a one-third interest in the Central California Traction Company, which serves the district between Stockton and Sacramento. Today the two companies jointly handle a substantial quantity of traffic through their interchanges at Stockton, Oakland and San Francisco. Acquisition of control of Western Pacific would, it is stated, assure continuance of the through north-south route via Great Northern—Western Pacific—Santa Fe, over the inner gateway known as the Bieber Route. This serves the Northwest, the San Joaquin Valley, Southern California, Arizona and New Mexico, and provides the only rail service in competition with the Southern Pacific between major points in California and the Pacific Northwest. Continued competitive service on the east-west route to and through Salt Lake City is also promised.

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Fuel Cell Research

PRESENTING the traditional report on his company's activities to the 26th Exide Press Luncheon, Mr. E. Powell, director (sales) of the Chloride Electrical Storage Co., Limited, outlined some of the work being undertaken at the company's new research laboratory. Designed specifically for battery research, part of the function of the new facility was the further development and improvement of existing commercial types of battery, but an important part of its effort was also devoted to the investigation of new systems for the supply of electrical energy and the development of those that appeared likely to have useful possibilities. The majority of new types of battery, said Mr. Powell, were highly specialised and for one reason or another — frequently high intrinsic cost as in the case of the silver-zinc battery—were not likely to have wide commercial application. The so-called solar batteries, which were not batteries at all but rather electric generators used for charging conventional batteries, were not seen as a commercial proposition for terrestrial use. The fuel cell was of great interest in the battery world because it was independent of the need to be recharged in the ordinary sense. It seemed an exciting possibility, particularly in the realm of electric traction, but while development was proceeding, its commercial application was still a long way off, perhaps about five years. The company has published a booklet written by Dr. M. Barak, head of the research department, covering these latest developments.

National Road Safety Posters

OVER half a million entries from all parts of England, Scotland and Wales were received in the national road safety poster competition organised by the Royal Society for the Prevention of Accidents, with the theme of the safety of children on the road. There were four classes and a total of over £400 was offered in prizes. The main award of £200 was won by Mr. Peter J. Burnhill, head of the Graphic Design Department, Stafford College of Art. His poster combines boldness with simplicity and depicts the face of a child, with the caption "Wanted Alive." The road safety motif is made plain by a huge exclamation mark pointing to the child, which embodies the familiar road sign, a broken white line. A picture of two children returning home from shopping, with the one word message to all road-users "Think," was the theme chosen by the winner of the class for teenagers (14 to 17), Penelope Jordan, aged 15, who comes from Banstead, Surrey. The main awards were presented at the Ro.S.P.A. National Safety Congress by the Minister of Transport.

OFFICIAL NOTICES

THE NORTHERN GENERAL TRANSPORT CO., LIMITED

VACANCY FOR TRAFFIC MANAGER

THE Northern General Transport Company is inviting applications for the position of Traffic Manager, which will shortly become vacant.

The Company (whose headquarters are at Queen Street, Gateshead, Co. Durham) with its subsidiaries, operates some 935 buses and coaches on stage carriage and express services, excursions and private hire, also extended tours in the United Kingdom and on the Continent.

The salary will be commensurate with the responsibilities of the position and have regard to the qualifications and experience of the successful applicant.

Applications, which will be treated in strict confidence, should be addressed to the General Manager of the Company to reach him not later than November 7, giving full details of qualifications and experience, with a front cover sheet showing:

1. Name and address.
2. Age.
3. Whether single or married and, in the latter case, the number and ages of any children.
4. Education.
5. Concise summary of previous appointments arranged chronologically.
6. Present salary.

SOUTHERN ELECTRICITY BOARD

TRANSPORT OFFICER

SUB-AREA Office of No. 4 (Bournemouth) Sub-Area. Salary N.J.C. Grade 5 (£1,020—£1,140 per annum). N.J.C. conditions of service.

The successful candidate will be responsible to the Sub-Area Secretary for the co-ordination, maintenance and administration of a mixed, decentralised fleet of, at present, approximately 425 vehicles.

Applicants must have had experience in the maintenance of road transport (preferably with a Public Utility in Great Britain) with particular reference to the control and maintenance of vehicles and mobile plant. A knowledge of road transport legislation and familiarity with modern vehicle costing methods, as well as administrative ability, are essential qualifications.

The successful candidate will be required to contribute to the Electricity Supply (Staff) Superannuation Scheme, if eligible.

Applications on forms obtainable from the Sub-Area Secretary, 1 Priory Road, Bournemouth, and returned to him, quoting Z.1274, not later than November 14, 1960.

GLASGOW CORPORATION TRANSPORT

TENDERS are invited for the purchase and removal of the following:

25 Double-Deck Motor Buses.

Forms of tender with further details, obtainable from the General Manager, 46 Bath Street, Glasgow, C.2, to be returned to me not later than 10 a.m. Monday, December 5, 1960.

ALEXANDER ROOKE,
Town Clerk.

City Chambers,
Glasgow, C.2.

UNILEVER COMPANIES

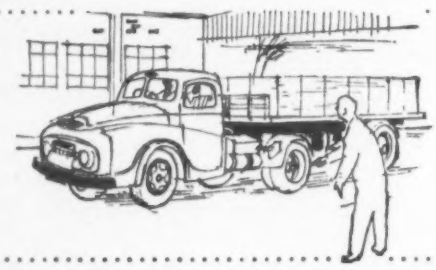
use

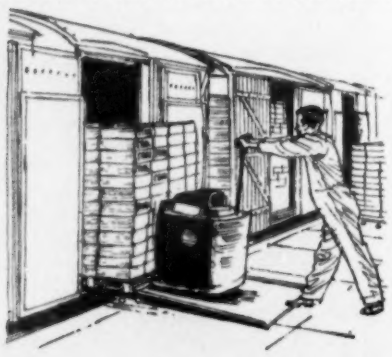
BRITISH RAILWAYS

Modern Freight Services

Unilever Companies transport many tons of their raw materials and finished products with the help of British Railways. There are more than 800 Express Freight trains time-tabled every weekday, many giving next morning arrivals over long distances. From many towns British Railways Export Express services give assured next-morning delivery for wagon-load traffic to London Docks (Royal, India & Millwall Groups), Merseyside, Manchester, Goole, Grimsby, Hull, Glasgow & Grangemouth. Charges are fully competitive: ask your local Goods Agent for details.

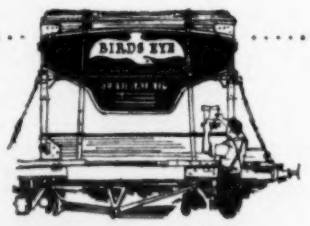
S.P.D. is the warehousing and distributing associate of Unilever Ltd. Many of its depots are connected with rail sidings and take delivery direct from British Railways pallet vans.



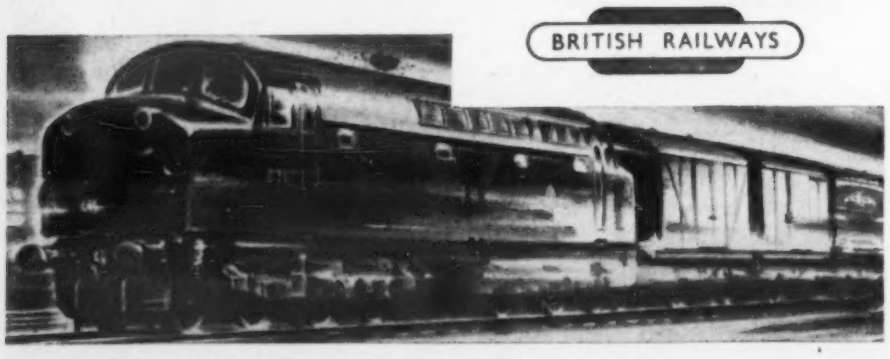


Van den Berghs & Jurgens Limited make a wide variety of margarines and cooking fats which are delivered by British Railways pallet vans to S.P.D. depots throughout the country. By using British Railways, Van den Berghs & Jurgens Limited, like other Unilever Companies, ensure that their products reach their destination quickly and safely.

Birds-Eye Foods Ltd. quick-freeze a variety of foods which are carried across the country in British Railways refrigerated containers specially designed for the purpose, ensuring that the foods are kept in perfect condition.



BRITISH RAILWAYS



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The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements.

Transport Debated

INCREASING in volume and complexity are the problems confronting statesmen, and whatever may be the record of the British Government in other directions it has been sadly lacking in respect of transport, the key industry; in fact, it would be difficult to find a more striking example of how not to treat the railways. After much pressure a modernisation plan was agreed, subsequently revised in the light of experience and accepted by the Government. Still later, when financial results largely beyond the control of the Commission were found disappointing, an advisory group of four, eminent in business but inexperienced in transport, was appointed. With the prospect of an additional burden on the Exchequer there was reason for this further inquiry, and there would probably have been no complaint about it had the constitution and terms of reference of the new body complied with normal usage. From the start, however, Sir Ivan Stedeford and his colleagues must have been handicapped, not only by the absence of either transport or trade union representation, but also by dictation as to the sort of recommendations the Government expected of them. This modern example of what has been termed Star Chamber procedure is already familiar to our readers. We mention it only as a reminder of the curious methods of the present Minister of Transport which border on the eccentricity attributed to him in the House of Commons last week by no less a person than Sir Toby Low, chairman of the Select Committee on Nationalised Industries. The occasion was a debate on two reports—one that of the Commission for the year 1959 and the other that of the Select Committee on the organisation and activities of the Commission, reviewed in our issue of July 30.

Growing Understanding

THE debate was noteworthy for two reasons: it showed a growing awareness of the problems of British Railways and a sympathetic understanding by many members of the complexity of the tasks facing the Commission. On the other hand, in contrast to the reasoned opinions of the Opposition, politically inspired perhaps but sensible nevertheless, and excluding Mr. Holt's Liberal theory of a return to the pre-1929 free-for-all in public transport, there were some Conservative back-benchers who would add to existing confusion by breaking up the Commission and imposing a return to independent management and control. Apart from all this, there was the Minister's surprising announcement of the setting up of yet another committee—the existence of which one might have suspected—this time under his chairmanship. Its immediate task, he said, would be to consider what further changes—or, to put it plainly, cuts—should be made in the modernisation programme and, in the long-term, how railways are likely to fit into the general transport picture. He perceives, at long last, "a technical revolution in transport," and it is in this somewhat piecemeal fashion that he is to conduct an inquiry that ought to have been made at least a decade ago. There is, however, one cause for satisfaction—that the Government is at length alive to the need for viewing transport as a whole—and another lies in the fact that in addition to his "advisers" the new body will embrace B.T.C. representation. But why not also the railwaymen, whose "morale and well-being," Mr. Marples admits, "are of the utmost importance"? One cannot escape the impression that, in contrast to the reasonable methods of his predecessor, the Minister's handling of the railways has been clumsy and discourteous; both officers and men are dispirited by his brusqueness and lack of understanding.

Fresh Inquiry

THE fact remains that, despite the considerable amount of advice and information to hand in the report of the Select Committee and in the findings of the Stedeford group which he has promised to embody in a White Paper, the Minister needs yet another exploratory body to decide about the railways. But can it be that the impetuous Mr. Marples has laid too much emphasis on his latest "compact study group"? If, apart from looking into the future, it is intended to examine existing proposals and recommendations and decide, from a practical point of view, which of them can be implemented it will perhaps perform a useful and necessary service. The Minister assured the House that there would be no change for the sake of change, and he rejected Press forecasts. As Mr. Wedgwood Benn demonstrated by chapter and verse, most of the strictures contained in the Prime Minister's remit of March 10 last have been answered in the Commission's favour by the Select Committee's report, though its chairman denied any necessary connection between the two. It may well be that in the light of the latter document the Minister is thinking again about drastic changes in the structure of the Commission and its already decentralised management. Having given as justification for his latest action the Commission's serious financial position he posed the question: "What problems have we to solve?" and replied:—

> First organisation; what is the best organisation for the railways and for the Commission's other undertakings and for their relationship to one another? Secondly, management; what improvements can be made in management? Thirdly, modernisation; do we still pin our faith to modernisation and, if so, how much of the system must be modernised to carry traffic suitable to the railways? Fourthly, restrictions—I mean by this statutory restrictions; ought the railways to be freed from restrictions put on them when they had a monopoly? Fifthly, property; how can the best use be made of the Commission's property? Sixthly, are fundamental financial changes required? Seventhly, how can we achieve viability?

These are urgent matters indeed; in considering them one assumes that the Minister will heed also B.T.C. advice.

Need for a Policy

IN the absence of any knowledge of the Stedeford recommendations the debate was held in an atmosphere of unreality, and the final views of the House must await publication of the promised White Paper containing the Government's proposals. Meanwhile, as Mr. Ray Gunter (of the T.S.S.A.) observed, the Minister can hardly "expect union leaders or the Commission to keep pleading with the men and cajoling them into the paths of discipline and duty when they are in a state of insecurity." So far Mr. Marples does not seem to have taken the unions fully into his confidence; it is time he did. The primary need is to decide speedily on the final character of the modernisation plan so that there may be no more enforced delay. It is dangerous, for instance, at this late hour to question the desirability of the London Midland electrification in the face of all experienced professional judgment, let alone the fact that so much work has already been done on it; as the chairman of the Select Committee remarked, the quicker it is completed the better. To stop it would make us the laughing-stock of Europe. In fact, if railways are to be part of the transport picture—and they can play a vital part—then we need modern ones and not museum pieces; we need them quickly and it is surprising that money for modernisation is not being increased rather than cut. One final word: despite what we have said about Mr. Marples we believe that in his own light he is doing his best. But what a different position transport in Britain might have achieved had there been worked out over the years by the permanent officials of the Ministry of Transport a positive transport plan comparable to those which obviously actuate the continuous process of railway improvement and pruning, parallelled by motorway plans, in the leading European countries. Perhaps, after all, the energy of the Minister will succeed in stopping the drift.

NEWS SUMMARY

DISMISSING the Channel Tunnel project as "40 years too late," Mr. Cecil Byford, general manager, Dover Harbour Board, on Monday announced plans for developments at a cost of £2 to £3 million to provide for faster turn-round of ships. Car traffic, which in 10 years has trebled to an annual flow of 300,000 vehicles, is expected to reach 600,000 in 1965 and pass the million mark by 1970.

We regret to record the death of Mr. Claud Barrington, a leading figure in the large-scale organisation of road haulage. A portrait and biography appear on page 9.

The B.O.A.C. this week introduced the Douglas Cargomaster aircraft loader to regular service at London Airport. See page 14.

Last week's Parliamentary debate on the railways and the national transport situation is reported on page 5; editorial comment appears above.

The Simms petrol-injection system shown at the Motor Show is described on page 6.

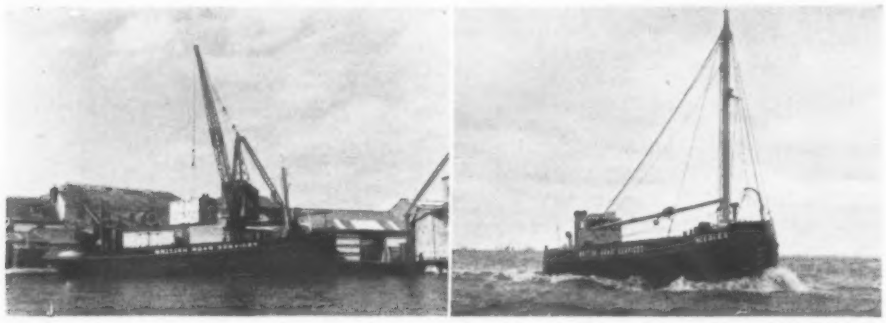
The new test track of the Road Research Laboratory at Crowthorne has been put in commission. See page 13.

B.R.S. AFLOAT

Additions to Solent Cargo Fleet

ISLE OF WIGHT OPERATIONS

TWO new vessels have joined the British Road Services fleet of powered barges which plies between the mainland and the Isle of Wight on scheduled services, and carries around 80,000 tons of freight annually to and from the island and Portsmouth and Southampton. The two new vessels, *Needles* and *Cowes*, of 93.46 gross tonnage, are all-steel



B.R.S. m.v. "Field" discharging railway containers on to vehicles at Thetis Wharf, Cowes; right, "Needles," one of the two new vessels, crossing the Solent

chine barges built on traditional lines, and their bluff, well-rounded bows will be useful in lifting them over the choppy Solent seas. They are powered by twin Kelvin-type K4 diesels of 88 h.p. at 750 r.p.m. on right- and left-hand drive to the two screws, giving a

Responsible for B.R.S. operations on the Isle of Wight, Mr. W. J. Irons, Southampton district manager, with Mr. E. L. Kingswell, Isle of Wight branch manager

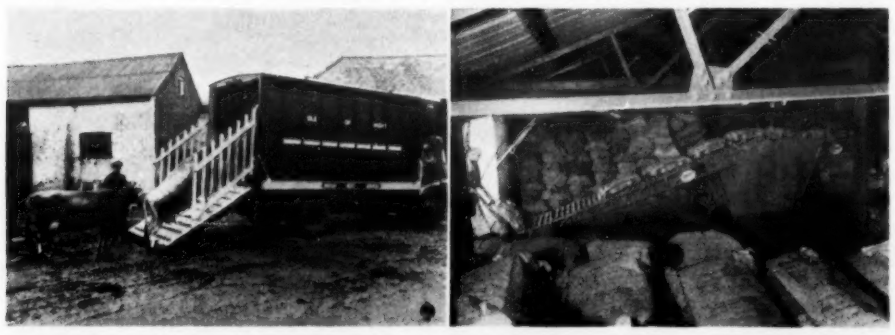
speed of nine knots. Eighty feet long and with a moulded breadth of 16 ft. 6 in. and depth of 8 ft. moulded, they are each manned by four men and set a high standard of crew accommodation.

Two Groups of Services

These two vessels are mainly engaged on the Southampton to Cowes and Newport service and convey large quantities of fresh fruit and vegetables which are delivered to island destinations the same day. They also carry bulk cargoes of flour, cattle food and other general goods for either direct delivery or storage at warehouses at Newport. Other vessels in the fleet are engaged regularly between Portsmouth and Cowes in the carriage of containers of sundries traffic as well as more specialised cargoes ranging from meat, ice cream and confectionery to large agricultural machines, girders and cables.

As B.R.S. operates on the basis of being the sole agent on the island for British Railways goods and passenger freight, a number of B.R.S. vehicles is based at railway stations on the island and, in a well-integrated operation, the Commission's road services hold railway rate books, collect through charges, and use railway documentation in the same way as a B.R. goods station.

Traffic on the B.R.S. vessels is not, however, restricted to that originating from its own services or the railways, for it is augmented by that brought into B.R.S. wharves by private hauliers or C-



Agricultural produce or livestock forms a large part of the general B.R.S. traffic on the Isle of Wight; right, fertiliser is received direct ex-ship into store at Newport Quay. A Fourways conveyor is employed

licensed vehicles for shipment to or from the island. This is either delivered by B.R.S. vehicles or collected from the quay.

Variety of Operations on Island

While some of the B.R.S. operation on the island bears a similarity to a parcels-smalls operation a healthy general haulage organisation is kept busy on the island serving agriculture and the various aspects of industry which assist the island's economy, such as shipbuilding, aircraft manufacture, several light engineering undertakings and the production of prestressed concrete.

Six of the collection and delivery vehicles are equipped with radiotelephone giving direct communication between the branch office in Newport and the drivers and this has helped to improve the service the branch gives to the more remote parts of the island. B.R.S. has warehousing accommodation on the island concerned with the storage of a variety of goods ranging from beer, wines and spirits, fertilisers, cattle food, flour, sugar and newsprint.

Integration of road and rail in handling the Shepard Brothers, Limited, and proceeded to amalgamate the activities of these Isle of Wight haulage and shipping companies.

Crouchers and Shepard Brothers had been operating cargo boat services to and from the mainland since about 1800. Chaplins were agents to the London and South Western Railway for traffic to East and South Wight, plying between Gosport, Southampton and Ryde and St. Helens, and Shepard Brothers held a similar agency for traffic for Newport, their vessels plying from Southampton to Cowes and Newport. At Shepards Wharf at Cowes, foreign vessels berth to land their imports into the Isle of Wight and coasters discharge for inland use considerable quantities of granite and road-making materials.

Merger of Services

It was in 1937 that the services of all four operators were welded into a composite service operating between Portsmouth and Southampton on the mainland and Cowes and Newport. A year later, two new vessels, *Mount* and the dumb-barge *Remount*, were put into service and in 1949 *Covert*, *Field* and *Crop*, all of 89·65 gross tons and specially constructed to handle B.R.S. lift vans and railway cointainers, augmented the fleet. Now *Cowes* and *Needles* are in service. Their names indicate a departure from the practice initiated by Crouchers, as seen above, of using hunting terms for names of vessels in the fleet.

The service they join has been in operation for

Scene taken at Portsmouth Point about the turn of the century emphasises Pickfords' long association with the Isle of Wight trade. At this time Pickfords was agent to the L.B.S.C.R.

more than 150 years, for records show that Mr. Shepard was unloading the sailing vessel *Bee* on Newport Quay in 1800 and an old account talks of that sailor linking up with the Pickfords packhorse service before the railways came. The history of regular maritime communication between Hamp-

shire and the Isle of Wight in fact extends over a considerable period; the records show that in 1774 packet boats left Southampton every evening except Mondays for the Isle of Wight. A hoy is also reputed to have sailed from Portsmouth twice weekly about that time. Traffic developed through succeeding years and was, of course, considerably helped by the opening of the Royal Pier at Southampton and the coming of the railway to Portsmouth. The success of the island as a resort was assured with the patronage bestowed by royalty in the Victorian era and the social progress of the 20th century has added its substantial quota.

We regret to record the death, at the age of 75, of Mr. E. Casey, A.M.Inst.C.E., former general manager of New Zealand Government Railways.

The annual dinner-dance of the Traders' Road Transport Association was held in London on Monday; the guests were welcomed by Mr. Stanley C. Bond, the president, who performed that function for the seventh time.

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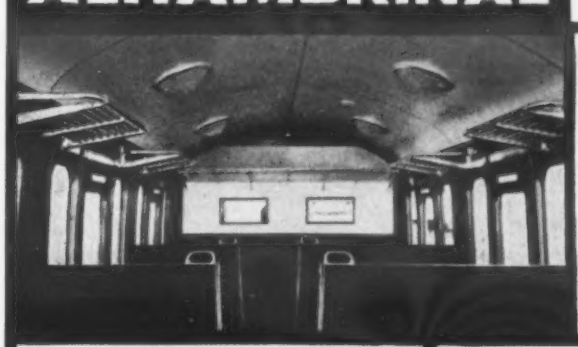

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LORRY—BUS—COACH

Minibus Prosecution Dropped

AT Petersfield magistrates' court last Thursday, a driver was summonsed for driving a 12-seat vehicle without a public service vehicle licence, and the Sunline Minibus Company, of Leytonstone, London, E.11, was summoned for employing him to drive the vehicle without the licence. The police told the bench that they did not propose to offer any evidence. Said Inspector A. Atterton: "It would have been argued whether the vehicle could be regarded as a public service vehicle," and he added that he had been in touch with the Ministry of Transport who had indicated that the law was not clear on this point and that it would not have prosecuted in similar circumstances. The chairman (the Hon. Mrs. J. Bickford-Smith): "It does seem an unsatisfactory state of affairs for people who own this type of vehicle." However, for driving the vehicle without a driving licence, the defendant was fined £5, and for driving without insurance he was fined £10, disqualified for one year, and ordered to pay £1 6s. 3d. costs. The Sunline Minibus Company was fined £3 for permitting an uninsured driver and £1 costs.

Higher Insurance Premiums

GOODS vehicle operators may be faced with considerable increases in insurance premiums at the beginning of next year. It is stated that an increase of between 15 and 25 per cent in premiums has been decided upon by the Accident Offices Association. The upper figure would be for A-licensees, the lower for C-licensees.

Greenwoods Buy in Liverpool

TWO Liverpool haulage businesses have been acquired by Greenwoods (St. Ives), Limited. They are Collingwood Haulage Co., Limited, and its subsidiary, Merseyside Carriers. The price is £45,000—£25,000 in cash and 80,000 shares. Early in October Greenwoods bought three Warrington haulage and warehousing concerns for £40,000. They were: Jay Pee (Transportation), Limited; Jack Priestley (1937), Limited, and Jay Pee (Contracts and Warehousing), Limited.

Bridgnorth Bus Problem

DURING reconstruction only a 9-ft. carriageway is open on the Severn bridge at Bridgnorth and at one side there is no parapet. Wolverhampton Corporation Transport is using small buses on its service during the day and not running over the bridge after dark. Midland Red is not using the bridge at all. During the suspension of the services passengers have to cross the bridge on foot and either climb the steep hill to the town on foot or use the Cliff Railway.

Uxbridge Trolleybus Route Goes Next

TROLLEYBUSES will disappear from most of Uxbridge Road on and after November 9, in the next stage of the London trolleybus-to-bus conversion programme.

Route 607, Shepherds Bush—Uxbridge, is replaced unchanged by bus route 207 but there will be a weekday route 207A, Chelsea (Stanley Arms)—Hayes Station, via Kings Road and the route of 49 to Shepherds Bush, and subsequently via Coldharbour Lane to Hayes Station. In the evening it will run Shepherds Bush Green—Hayes Station. Route 120 will be curtailed during the Monday—Friday peak at Southall (Delamere Road). Route 655 is replaced by bus 255, Acton Vale (Bromyard Avenue)—Hammersmith Broadway, extended Monday—Friday peak to Clapham Junction, evening, Brentford (Half Acre) only. On Saturday it will run Hanwell Broadway—Hammersmith (evening, Brentford only) and on Sunday Hanwell—Brentford.

Record Addition to L.T.E. Costs

DELEGATES of London Transport bus drivers and conductors last week accepted the offer of an increase in their basic wage of 18s., which together with additional payments for overtime and spreadover working will bring the increase in their weekly pay up to about 28s. a week. In addition to the offer of 18s. a week on basic pay the delegates had the choice of accepting an accidents allowance scheme or 2s. 4d. extra on their Saturday pay. The delegates expressed a preference for the accidents allowance scheme, in other words, they declined to guarantee the completion of Saturday duties on overtime. The cost to London Transport of this largest single wage increase for bus employees will be £2¼ million annually and consideration will be given immediately to ways of finding the extra revenue needed to meet it.

Designed for tourists, the Japanese half-deck coach shown here is 38 ft. long and seats 83. It is rear-engined and air-conditioned; right Leyland Worldmaster 60-seat on a tourist run in Costa Rica

Nottingham Distribution Depot

WITH its new warehouse and offices officially opened by Mrs. Hodgson, wife of Mr. C. R. Hodgson, O.B.E., M.Inst.T., East Midlands area Licensing Authority, A. R. Marshall and Sons (Bulwell), Limited, Bulwell, Nottingham, now has a total of 30,000 sq. ft. of covered accommodation on a site area of more than seven acres. The new offices have been built to provide ample space for a greatly increased administrative staff which daily deals with an operating fleet of more than 100 Marshall vehicles. The company was founded 33 years ago by the present managing director, Mr. A. R. Marshall; the original premises in Linby Street, Bulwell, were vacated in 1947 for the present more spacious site at Hucknall Lane. Since the recommencement of operations after nationalisation there has been a continuous and rapid expansion of the whole undertaking. In 1958 B. Keetch (Hauliers), Limited, became a part of the growing Marshall group and early in 1960 J. Gamble (Transport), Limited, Carlton, was acquired. The new warehouse may be considerably enlarged and it is hoped to add a railway siding.

Trolleybus Drivers and Accidents

AN inquest at Newcastle upon Tyne last week has led to the city's road safety committee starting a campaign to change section 259 of the Road Traffic Act, 1960. The section exempts drivers of trolleybuses from reporting accidents to the police. The inquest was on a 76-year-old woman knocked down by a corporation trolleybus. She got to her feet, said: "I'm all right," and went home, but subsequently was taken to hospital, where she died. Police Inspector Sidney Mason said at the inquest: "If the accident had been reported to the police we would have contacted everyone concerned, particularly the old lady, and she would have been in hospital in a very short time. But under the Act it is not even necessary for trolleybuses to stop, let alone report, after an accident. This was in the old Act and has been consolidated in the new one. It is most unsatisfactory." Mr. F. S. Taylor, general manager of Newcastle Corporation Transport, said drivers were urged to report accidents.

Turnround Campaign Needed

OF the recent recommendation by the national rates committee of the R.H.A. that road haulage rates should be increased by 10 per cent, Mr. R. B. Brittain, chairman of the committee, says this week that the facts speak for themselves. "I should like, therefore," he goes on, "to restrict myself to one of the riders added by the committee to its general recommendation. It points out that something in excess of 10 per cent would be needed in some cases. One of the examples it gave was of an operator whose vehicles had a good deal of their work in the congested centres of large towns. To a greater or less degree this affects all hauliers. There is nothing they can do about it except make the facts known, and ask for the co-operation of other people including the authorities. Where the vehicle is held up in traffic the problem is one we must leave to the Government while not forgetting to urge them to do something about it. But there are other delays where the customers themselves can help us. Many of them do, but there are also a number that do not. The problem can be stated simply. It is one of quicker turnround.

"When a vehicle arrives at a factory or warehouse, or shop or dockshed, to collect or deliver a load, how long does it have to wait before being attended to? Something up to half an hour might be regarded as a reasonable time. Why do vehicles often have to wait very much longer? There are many cases where the customer does not give sufficient thought to the time and money that are being wasted by delays, and that must be made up or paid for by somebody. Having laid on transport the customer may neglect to make the necessary arrangements to receive it. He may have no men to spare to help load or unload. He may have failed to remember that he is in an area where loading or unloading are banned at certain hours of the day. He may operate a five-day week, and fail to realise that his staff who have the duty of receiving goods put the shutters up for the week-end at 3 p.m. on Friday. I should like to see a publicity campaign for the quicker turnround of goods vehicles. This is something the R.H.A. is already considering," concluded Mr. Brittain.

Vague Normal User Condemned

TWO conclusions of some interest are included in recent licensing appeal decisions reached by the Transport Tribunal. In the first appeal, concerning William Cumming (Haulage), Limited, of Paisley, the Tribunal comments on the normal user declared by the applicant (this was not, in point of fact, the subject of the appeal). The area to be served was to be "25 miles, and elsewhere as required." This, said the Tribunal, was quite unsuitable. The words meant that the vehicles could go wherever any customer asked them to go. That sort of declaration should never be accepted. The area has been amended by counsel for the applicant to read: "75 per cent within 25 miles, the remainder as required."

In another appeal, concerning McKelvie and Co. (B.M. and P.), Limited, of Barrhead, the Tribunal rules that a licence holder who is authorised to use a certain number of trailers the weights of which are not specified is clearly entitled to substitute heavier trailers than those originally in use. To assume that such a course was wrong would be to assume something which was not on the face of the licence, since this placed no limitation on weight. The appeal has particular relevance to applicants seeking to replace special A-licences by ordinary A-licences. In a third appeal, G. S. John, Limited, the Tribunal says that applications for A-contract licences should be published. This is because, it says, a new or variation application of this character is not one that a licensing authority is bound to grant. It must therefore be published, unless of a trivial character. At present, none of the licensing authorities publishes A-contract licence applications; eight of them notify grants, the Western area publishes holders' names and vehicles authorised, but not the name of the hirer, the Metropolitan and South Eastern areas publish nothing at all.

Bus and Coach Developments

Bristol Omnibus Co., Limited, is publicising the attractions of Bristol Airport as a place of interest and has issued a folder with that in mind which includes a composite timetable of the four routes which link Lulsgate Bottom with the city of Bristol.

Barton Transport, Limited, applies for the licences of W. H. Patch-Cream Bus Service (D.R. and B. McKechnie and N. Cole), Stamford. This operator, with a fleet of some 18 vehicles, is a main provider of bus services in the Stamford area.

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PARLIAMENT AND RAILWAYS

Objectives of New Ministerial Committee

TO SURVEY GLOBAL TRANSPORT REQUIREMENTS

THE debate in the House of Commons last week on the annual report and accounts of the British Transport Commission for 1959 inevitably revolved more about the prospects of securing equilibrium in the accounts in future years. The Opposition motion criticised the absence of a consistent national transport policy within which the B.T.C. could operate effectively.

As is now customary, the Minister of Transport painted in the outlines of the financial situation of the railways. This year, the Government would be paying £105 million from above the line, in effect a subsidy. In 1959, the loss was £110 million, which was almost 25 per cent of the turnover. It meant that to break even the railways would have to increase their gross receipts by nearly one-quarter without any increase at all in expenditure. Put another way, the taxpayer was providing £200 per annum towards every railway worker's pay packet. Following the setting up of a special advisory group under Sir Ivan Stedeford the Government had received a number of recommendations, and as soon as proposals had been formulated they would be placed before the House in the form of a comprehensive White Paper.

Growth of Personal Transport

He had to take into account the needs of all forms of transport as well as public demand. Public demand showed itself in increasing measure in demand for road transport, not least for private cars. The impact of the internal combustion engine on society and the economy was only just beginning. Between May, 1957, and May, 1960, the number of cars on the road increased 30 per cent, from 4 millions to 5,250,000. Road transport now accounted for nearly three-fifths of the total freight carried by road and rail.

A considered view must be taken of that sort of thing. He had therefore set up a committee, to operate as a study group under his chairmanship, to consider what sort of and how big a railway system was needed in view of those factors. The Commission was represented on the group and was co-operating in preparing a revised modernisation plan. They would not only look at railway modernisation projects but try to satisfy themselves about the modernisation problem as a whole.

Meanwhile, it had been necessary to slow down to some extent the rate of investment, said Mr. MARPLES. This was not to say that there had been a total stop, but expenditure had been concentrated in the main on projects on which expenditure was already committed and on projects where the urgency was manifest. The Commission agreed that this slowing down was appropriate in the circumstances. There was no question of stopping modernisation. The ceiling laid down for 1961 was a very big figure from whatever point of view it was regarded.

No New Contracts

The Government, like the Select Committee, had been very much concerned at some features of the modernisation scheme, notably the increased cost of the present estimates as compared with the original ones. A particular case was the London Midland Region electrification scheme. The special advisory group, early on, expressed doubts about the economic aspects of the project as it had been explained to it, and the Commission had prepared a reassessment of the scheme in the light of its experience elsewhere as well as in the light of recent development, and this was under urgent examination by the Ministry. The Commission had agreed, pending the outcome of this examination, not to place new contracts, but there was no question of the cancellation of existing contracts, and work under them had continued.

Against this background he had reviewed the modernisation plan in fixing investment ceilings for the Commission's undertakings in 1961. In particular, the maximum for expenditure on the railways would be £140 million, as compared with about £160 million originally agreed for the current year. For the Commission as a whole, there would be a ceiling of £175 million, as compared with £200 million in 1960.

Answers Required Here

The questions before them were, first, organisation; what was the best organisation for the railways and for the Commission's other undertakings and for their relationship to one another? Secondly, management; what improvements could be made in management? Thirdly, modernisation: should we still pin our faith to modernisation and, if so, how much of the system must be modernised to carry traffic suitable to the railways? Fourthly, statutory restrictions. Ought the railways to be freed from the restrictions put on them when they had a monopoly? Fifthly, property; how can the best use be made of the Commission's property? He thought it was not being so used at the moment because of certain restrictions. Sixthly, are fundamental financial changes required? It had been suggested in many quarters that they were required. Seventhly and last—and this is where all these questions lead us—how can we achieve viability?

On railways themselves, they would have in mind the extent to which experienced railway managers were given enough opportunities. Should the Government conclude—and he was not himself able to say what they would decide—that there should be changes, a new deal would take many months to bring into being. Assuming that legislation would be needed, they would have to think about what could be done in the interim period.

As to the financial structure, the special advisory group had made recommendations so the material on which to base a decision was there and he hoped to include that in proposals. It was sometimes suggested that the Commission's debt burden was excessive. "I can understand that point of view, but the House will realise that the debt can only be transferred through the Exchequer to the taxpayer. It cannot be wiped out," said Mr. Marples.

Then, if unprofitable services were to be provided on grounds of social need, should this be decided by the Commission or by the Government? The Commission had at the moment a statutory duty ". . . to have regard to the needs of the public, agriculture, commerce and industry." The interpretation of these words might be the nub of this problem. Any transport undertaking must consist of some profitable and some unprofitable services, and the first problem was how far the taxpayer should be expected to pay for any uneconomic services.

Five major priorities for meeting the situation were suggested by MR. ANTHONY WEDGWOOD BENN, the Opposition leader in transport matters. They were: first, the Government should take over the capital and finance the deficit of the Commission until 1963. There was a necessity for financial reorganisation of the Commission and this would be the best way to do it; secondly, the Commission should then operate on an economic basis. It might be necessary for the Commission to pay a rent to the Government for the use of track. As was pointed out by the Committee, there should be a subsidy if the Government wanted to maintain non-economic services. Thirdly, the Transport Tribunal should be abolished; fourthly, there should be a full development of sites; fifthly, the modernisation programme should be speeded up.

Mr. Benn enjoyed himself contrasting the Select Committee recommendations with what the Prime Minister had said in March was wrong with British Railways. For example, he was totally contradicted on the need for more decentralisation; in fact on all major points he was destroyed by the committee.

No Co-ordination at Work

If there was one thing that was absolutely crystal clear from the Select Committee report it was that the Ministry of Transport did no co-ordination whatsoever in the field of transport policy. As an indication, Sir James Dunnett, the Permanent Secretary, was asked whose business it was to make estimates of the return on capital invested in the railways, in the light of the traffic they could expect to receive or, whether the return on building more roads or modernising certain lines of the railway was likely to show the better return. Sir James had replied. "That is a very difficult thing. The problem does not, in my experience, arise in quite that form." "That is absolute confirmation that there is no work in the Ministry of Transport on the return from different types of transport investment," said Mr. Benn.

SIR RICHARD NUGENT countered that policy in the days when he was at the Ministry was the development of modes of transport, whether rail, road, air or sea, to meet public demand and to avoid a system of tight planning such as Socialists preferred; to leave it to the consumer demand to decide what was needed. So far as possible, they had taken the forward view about what would be needed in the future and there was every sign that that policy had commended itself to the nation.

Regional Autonomy Fiction

MR. A. ALBU said that without financial autonomy there was no autonomy. If the regions were unable to act as separate entities, with their own profit and loss accounts and revenue and expenditure accounts, autonomy was nonsense. Without it, there was only a delegated authority, not autonomy. He did not believe it was possible to have such independent economic systems in an organisation like this, particularly the more it became streamlined. SIR TOBY LOW, chairman of the Select Committee, ended a thoughtful speech with the trenchant observation, "all of us members of the House of Commons can help to get this return of confidence [in the railways]. Let us remember that we cannot manage the railways. What we can do and what we must do is not to prevent others from managing them well." MR. P. NOEL-BAKER castigated the Minister for "utter frivolity and irresponsibility" in his utterances about railways. At Scarborough he had dug up a nine-year-old incident.

A lot of the work of the Commission was put down to area board level and was performed by the boards, said MR. R. J. MELLISH. Schemes up to £500,000 were decided on and agreed by them—that was the measure of the power which they had. When members talked about decentralisation how much more decentralisation did they want than that area boards should have power to approve schemes costing up to £500,000?

An outline of what was currently in the Government's mind was presented in the summing-up from MR. JOHN HAY, the Joint Parliamentary Secretary. It suggested that the Ministry had taken to heart criticisms of drift in the past. "There must," he said, "be a searching inquiry into the major modernisation schemes which are in the Commission's programme, for three reasons: first, to determine as accurately as we can the extent to which the individual schemes will be profitable, to determine the profitability of the enterprises in which we are asked to invest very large sums of taxpayers' money; secondly, so that we can determine the order of priority of the schemes in the programme; thirdly, so that we can judge the modernisation schemes against similar and prospective investment in other forms of transport in this country in the light of the constantly changing pattern of demand.

Value for Money Survey

"I will give an example of what I mean, the electrification of the London Midland main line. We now know that this will cost about £160 million. This is two and a half times as much as our spending on major and new construction on the roads for 1960-61. That figure is £65 million. To take another comparison, the £160 million for the London Midland electrification scheme is eight times the cost of building the M1."

The new group was not a formal committee. It was a working group. Its composition had varied, and no doubt it would continue to vary. Essentially it was intended to be a meeting of the Minister and his advisers with representatives of the Commission under Sir Brian Robertson.

Its method of work fell into short-term and long-term parts. In the short-term, the group had been looking at some of the modernisation proposals which need the most urgent examination. It had almost completed its examination. In the long term, it would be considering the fundamental question of the size and shape, not only of the railways, but of the transport system as a whole over the next 25 years. To begin with, it was discussing two things—first, a costing study on the profitability of traffic, something which we had to have, and, secondly, a study on the trends of traffic as between the railways and other forms of transport. The impression left is that if tasks of this calibre are to be essayed a permanent body of experts, or a Royal Commission, is needed.

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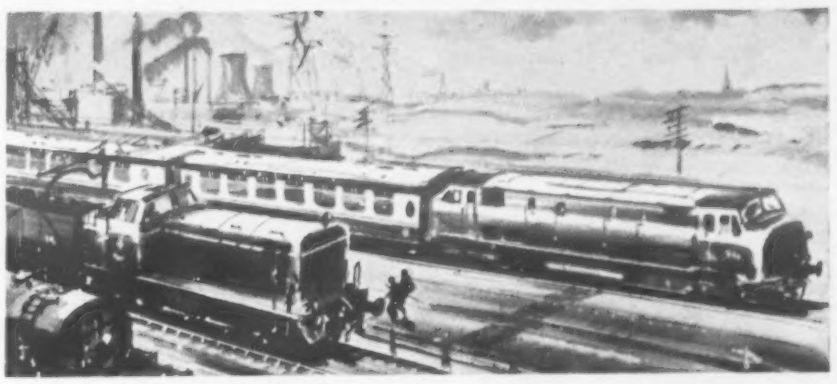

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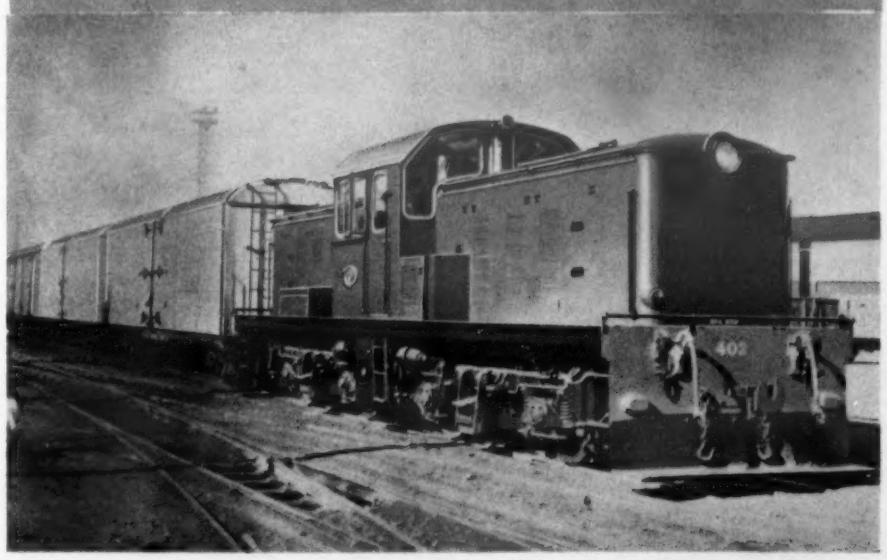

18 of these 420 h.p. 41 ton Diesel Electric Locomotives have already been supplied to New Zealand Government Railways. A further order for 20 sets of power equipment for similar locomotives has now been received for fitting into Railway built mechanical parts.

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PETROL INJECTION

Simms Motor Units Development

DEVELOPMENT by Simms Motor Units, Limited, of a new system of petrol injection claimed to be suitable for quantity production at little greater cost than the carburetter it replaces, which was announced at the recent Earls Court Motor Show, could well usher in a new phase of development for the mass-produced petrol engine. The carburetted engine has reached a high state of efficiency, aided by improved fuels, but optimum efficiency is always circumscribed by the requirements of carburation, which involve acceptance of a compromise in the engine's breathing capacity.

The principal advantages obtainable from a well-designed petrol-injection system are improved volumetric efficiency, through elimination of the carburetter venturi and a design of air intake and valve timing uncompromised by carburation considerations; improved performance, through more accurate and more progressive metering of fuel and better balance of mixture distribution; and improved fuel economy.

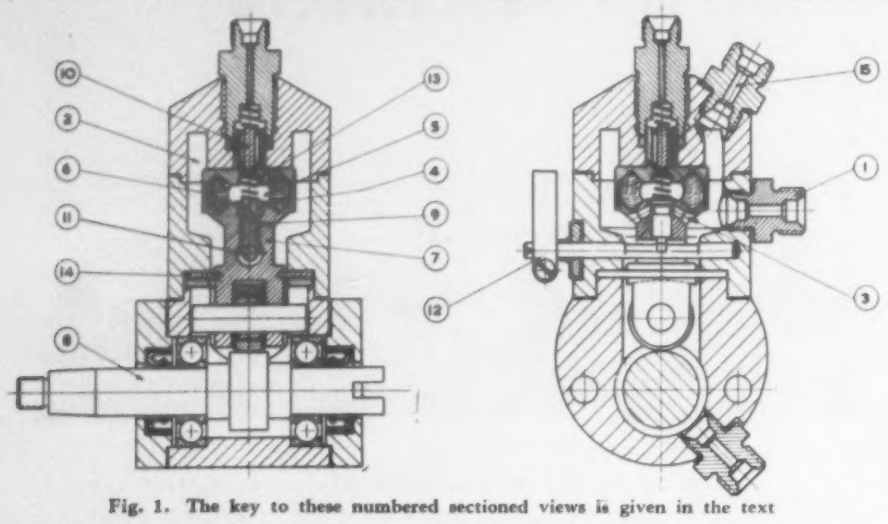


Fig. 1. The key to these numbered sectioned views is given in the text

Unique features of the Simms petrol-injection pump, which is basically simple and has been designed into a compact self-contained and self-regulating unit giving timed injection, are a single pumping element and single injector feeding any number of cylinders; a short plunger movement that deforms a specially developed synthetic rubber ring to create the pumping action; a sensitive and lightweight metering control; and a short injection period occupying only 10 deg. of crankshaft rotation, permitting choice of injection timing to promote complete inlet manifold scavenging for each cycle.

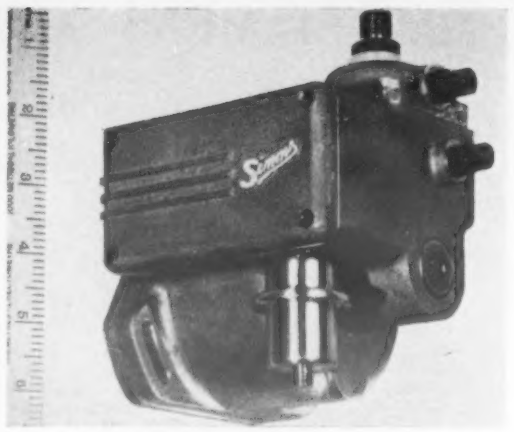
Reference to Fig. 1 shows two cross-sectional views of the pump, and serves to describe its function. Petrol enters by gravity or conventional feed pump through union 1 and fills chamber 2. Drillings 3 communicate with inlet valve seat 4, and when valve is open petrol flows into chamber 5. This chamber is sealed by the synthetic rubber ring 6. Upward movement of the plunger 7, actuated by the camshaft 8, causes the inlet valve 9 to close. At the closure of inlet valve 9, the petrol in the now completely sealed chamber 5 comes under pressure. Further upward movement of the plunger 7 causes displacement of the inner wall of the synthetic rubber ring 6, resulting in a rapid discharge of petrol through the non-return valve 10, and so by feed line to the injection nozzle. The camshaft imparts a lift of 0.015 in. to the plunger and being driven at half engine speed is supplied with a number of lobes equal to the number of engine cylinders.

Metering control is by the eccentric shaft 11, which is carried in fixed bearings formed in the pump housing. Rotation of the eccentric shaft 11 by the lever 12 decides the moment of closure of the inlet valve under the influence of spring 13 and so lengthens or shortens the effective pumping stroke by regulating the amount of spill back into chamber 2. A simple diaphragm seal 14 serves to divide the petrol chamber 2 from the oil-filled camshaft housing. The union 15 provides a continuous petrol bleed back to the tank to prevent vapour lock in the chamber 2.

Mixture Control

Fig. 2 illustrates the design and layout of the mixture control system applied to an 845-cc. four-cylinder engine, which provides correct fuel delivery to give optimum acceleration and part-load and full-load performance; cold-starting enrichment; and automatic enrichment during engine warm-up.

Referring to the numbers on Fig. 2, fuel is fed from the pump 1 through a pipe to a special low-pressure pintle-type nozzle 2. The pump output



The inch divisions of the rule give scale to the Simms fuel-injection unit

control lever is shown abutting on to a camface 7. Anti-clockwise movement of the lever increases fuel delivery and vice-versa. A flyweight governor 3 driven from the pump shaft registers changes in engine speed through a bellcrank lever to the cam and lever 4, movement of which is relayed through linkage to camface 7, thus regulating pump delivery. The cam form on lever 4 is designed to match the pump delivery curve to the full-load requirements throughout the speed range.

The reduced fuel delivery required for part-load operation is obtained by means of the diaphragm unit 6 and hinged cam 7. The diaphragm is spring-loaded downwards and the upper chamber is in communication with the inlet manifold; variations

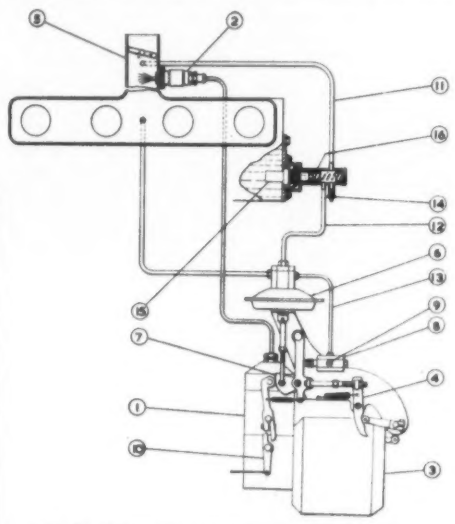


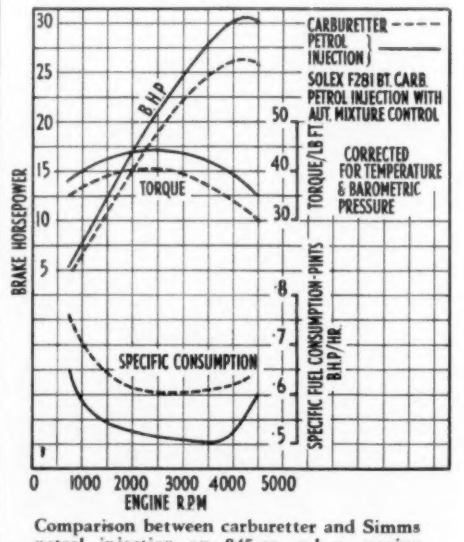
Fig. 2. Schematic arrangement of the Simms pump, injector and automatic mixture control, keyed for reference to the text

in manifold pressure, which are closely related to changes in engine load, cause the diaphragm to move up or down and, through a simple link, vary the setting of cam 7, thus modifying the effect of the speed-sensing control on the pump delivery lever in accordance with engine load.

As part-load fuel requirements vary also with speed, higher-speed operation at a given load requiring a richer mixture, the bleed valve 8 has been added to provide a further modifying effect on fuel delivery in accordance with speed variations at part load. In action, the governor-controlled linkage 4 is arranged to operate a part-load bleed valve 8, which is connected by a pipe to the upper chamber of diaphragm unit 6, admitting amounts of atmospheric air through variable orifice 9 and thus varying the manifold depression effects through the diaphragm and cam 7 on fuel delivery in direct relation to engine speed.

Cold Starting and Warming Up

Cold-starting enrichment is achieved through lever 10, which is connected to a conventional "choke" control and when operated overrides the automatic fuel-delivery controls; it can be adjusted to provide fuel up to 140 cu. mm. per injection if



Comparison between carburetter and Simms petrol injection on 845-cc. o.h.v. engine

required. The cold-starting control can be released as soon as firing occurs, when the automatic warm-up mixture control comes into operation.

Automatic enrichment and fast idling for warming up are obtained through a temperature-sensitive element 15 located in the cylinder-head water jacket, piston valve 16, adjustable air bleed 14 and pipe connections 11 and 12. When the engine is cold, the piston 16 is held to the left by a spring uncovering pipes 11 and 12 and adjustable air bleed 14. With the throttle valve set at normal idle position, extra air is fed to the engine side of it through 11 and 14, resulting in fast idling, while at the same time admission of air through 14 and 12 to the diaphragm unit 6 cancels depression and moves cam 7 to the rich position. As the coolant temperature rises, piston 16 advances to the right, first sealing pipe 12 and cutting off enrichment and then sealing pipe 11 and establishing normal idling speed.

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TRANS-EUROP EXPRESSES

Service, Speed and Comfort

WITH the object of making international rail travel in Europe more attractive Trans-Europ Expresses were first planned in 1954. Many services were, of course, available which enjoyed a high reputation for speed and reliability, but it was felt that this reputation could be further enhanced by establishing a network of special fast international trains of outstanding quality both for comfort and speed between principal European centres for business travellers and tourists.

By putting these ideas into practice, Continental railways have given a demonstration not only of

A French Trans-Europ Express set near Paris

European co-operation but also of their technical capacity in this special field of transport. Originally, it had been hoped to form an international railway company complete with its own rolling stock and staff, but this was found to be impracticable at that time. Instead, an agreement was reached between Belgium, France, Italy, Luxembourg, Netherlands, Switzerland and Western Germany to set up a T.E.E. Commission.

Organisation

The railway administrations of these seven countries together form the T.E.E. Commission and all have equal rights. The Commission is

Interior of the Dutch-Swiss T.E.E. and, right, breakfast on the S.N.C.F. T.E.E.

responsible for rules of procedure for all technical, operating and commercial aspects of the services and, as such, is the highest authority in the T.E.E. group. Subject to the authority and supervision of the T.E.E. Commission is an "Administration Gérante," which carries out the executive work of the Commission. At present the Netherlands Railways holds the position of Administration Gérante and so honours Mr. F. Q. de Hollander, its former president, one of the originators of the scheme.

Operation

As a result of these joint endeavours, the first T.E.E. services came into operation on June 2, 1957. In principle, each railway administration runs its own train sets and, as a rule, train crews are changed at the frontier points. There is a system of international accountancy to compensate individual administrations for costs incurred outside their own areas. Initially, plans were made for standard T.E.E. rolling stock. In the event, four different types were constructed—by the French, West German and Italian railways and by the Netherlands and Swiss railways acting together. All four types have the following features:—

1. All are self-contained diesel-electric multiple units. This avoids delay in changing engines and attaching coaches.
2. All have an authorised maximum speed of 87 m.p.h.
3. All offer a high standard of comfort.
4. First-class passenger accommodation only is provided.
5. All trains are dressed in red and yellow livery and bear the T.E.E. emblem.

With the introduction of the summer timetable for 1961 the Swiss Federal Railways will introduce four electric T.E.E. units on the Gotthard and Simplon routes. These trains will be air-conditioned, with a bar, a dining-car for 48 and first-class seating accommodation for 126 people. For the first time electric trains will be operated over lines with four different traction current characteristics.

Italian Trains

There are seven of the Italian type of train. Each consists of two motor coaches coupled together. One coach has 42 and the other 48 seats arranged on either side of a centre corridor. Seats are adjustable. Separate wardrobe and luggage space is provided. Doors are opened and closed from driver's cabin. Meals and drinks are served to passengers at their seats. The length of each train is 184·3 ft., its tare 100·9 tons, the horsepower is 980 and the total of seats provided is 90.

French Trains

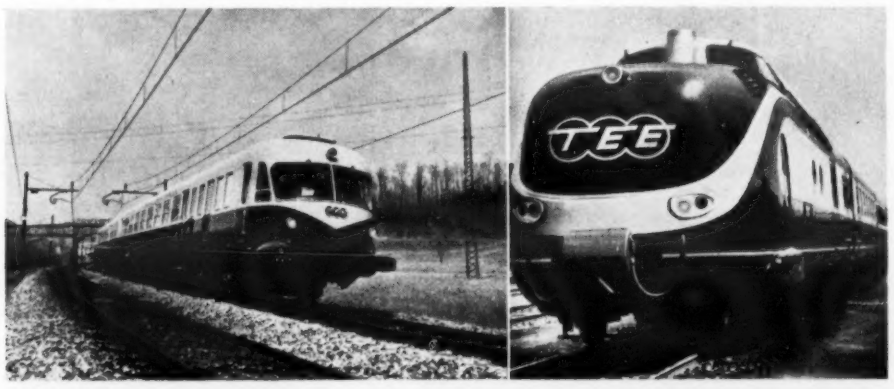
The French type is somewhat similar to the Italian. The standard formation of the trains is a motor coach plus one driving trailer with 39 and 42 seats respectively, each coach having a centre corridor. Wardrobe and luggage space is provided. Meals and drinks are served to passengers at their seats. The total of French rolling stock comprises 11 motor coaches and nine trailer coaches which can be used, as required, to make up the following formations: Two motor coaches and one trailer coach (120 seats) or two motor coaches and two trailer coaches (162 seats). The length of a two-unit train is 171·1 ft., its tare 83·7 tons, its power 825 h.p. and 81 seats are provided.

German Trains

The standard formation for the German trains is two motor coaches with from five to seven trailer coaches. The motor coaches do not have seats. Some of the trailer coaches have centre corridors; others have compartments with side corridors. One coach is the dining car and in another there is a small bar. Separate wardrobe and luggage space is provided. Some of the seats can be adjusted to an angle of 180 deg. Air conditioning is installed. There are 19 motor coaches and 45 trailer coaches of the German type. A Deutsches Bundesbahn seven coach train, i.e. two motor coaches and five trailer coaches, is 426·5 ft. in length, weighs 216·6 tons and has 2,200 h.p. available. There are 122 seats plus 46 in the dining car and seven in the bar.

Swiss-Netherlands Stock

The Swiss-Netherlands joint stock consists of five train sets, each comprising one motor coach (without seats) and three trailer coaches, one of which serves as the dining car. Here again, some of the coaches have a centre corridor whilst others have compartments with side corridors. Air conditioning is installed. Wardrobe and luggage space is provided. The length of this train is 318·8 ft., its weight is 236·3 tons and the horsepower is 2,000. The number of seats is 114 plus 32 in the dining car.



An Italian T.E.E. and, right, head view of one of the German trains

The lack of uniform rolling stock has not been a disadvantage. With the experience gained with the four different types it may be possible to evolve a standard design embodying all the best features of the trains now in service. The interior décor of all the T.E.E. trains is of a high order. The staff on these trains has been selected very carefully and on some trains hostesses are also in attendance.

All trains are run during the day. The high speed (maximum 87 m.p.h.) and the reduction to a minimum of stops en route and at frontier stations have made it possible to shorten journey times considerably. Customs and passport examinations take place on the train.

Reservations

The number of seats on the T.E.E. trains is limited. Seats need to be reserved in advance. To facilitate this a special Telex teleprinter system enables reservations to be made on the Continent in as little as 15 minutes, not only for the T.E.E. trains, but also on a number of connecting services. Central Telex teleprinter exchanges for the T.E.E. services have been established in Brussels, Paris,

(Continued on page 11)

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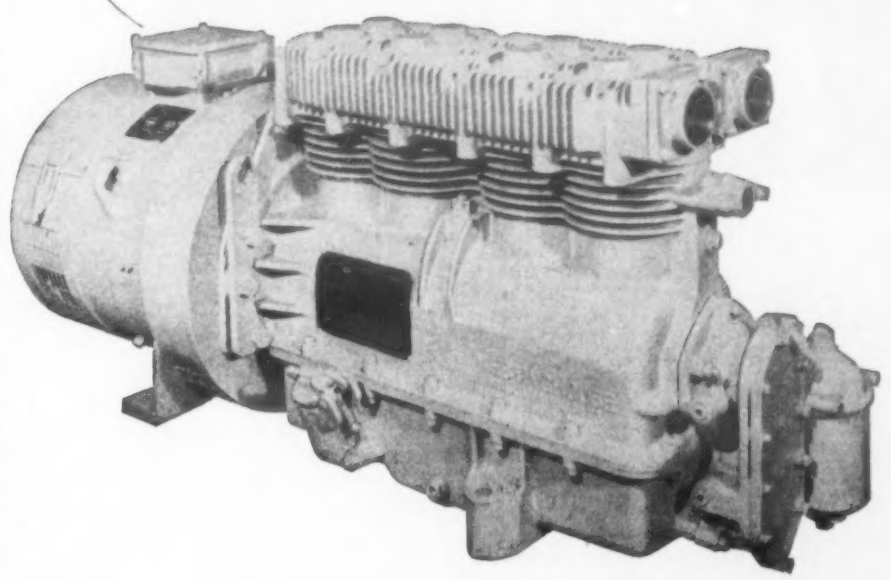

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NEWS FROM ALL QUARTERS

Amsterdam Paris Electrification

S.N.C.B. (Belgian Railways) has now commenced its preparations for the electrification of the Brussels—Mons—Quévy (French border) line. Electrification will be continued from Quévy to Paris, thus providing an unbroken link from Amsterdam.

Kiev Underground

The Kiev underground railway is reported to have gone into service on October 22. It is a line nearly four miles long. All six stations were built from plans by "the best Ukrainian architects" and decorated with white and rose marble, coloured granite and Ukrainian majolica. A second line is now scheduled for construction.

Severn Bridge Closed After Accident

Two spans of the long bridge which carries the Western Region line over the River Severn between Lydney and Berkeley Road collapsed into the river after a motor oil barge had collided with one of the bridge piers in fog on October 25. It is estimated that some months must elapse before a temporary structure for Severn and Wye Joint Line traffic can be erected.

Ship Canal in Philippines?

A Bill providing for the construction of a ship canal across the narrow neck of Luzon in Quezon Province, the Philippines, has been filed in the Lower House and will be up for consideration when the Philippine Congress reconvenes early in 1961. The canal, which would follow a straight line from the coast at Unisan on the west to Siain on the east, would cut 700 miles off the sea route between Manila and the U.S. West Coast. It would be 8½ miles long and 30 ft. deep.

Large Factory Move by Rail

Lightalloys, Limited, which forms part of the Manganese, Bronze and Brass group, is transferring the bulk of its works to Deans and Son (Yorkshire), Limited, at Beverley. From now until early next year, loaded containers will be leaving the factory bound for Yorkshire—a short road haul to Willesden goods yard and then the rest of the way by rail. It is estimated that the move will involve some 250 wagon loads of traffic—one of the biggest single rail removal jobs ever to be tackled in the London area. Part of the works is to be shifted to Glasgow and Ipswich.

South Mimms By-Pass: Flyover on A1

Work will start soon on the 1½-mile by-pass to South Mimms on A6. This will complete the general modernisation of the London approach road to the eastern arm of the London—Birmingham motorway at Park Street, near London Colney. Starting with a flyover junction on the A6 on the St. Albans side of South Mimms, the new road will run south-west of the village to join the Barnet by-pass (A1) at a large roundabout near Bignall's Corner. This roundabout has been designed for conversion to a flyover junction later on. A further scheme for which tenders have recently been invited is the construction of a flyover at the junction of A1 with Cecil Road, about half a mile north of Bignall's Corner.

French Car-Sleeper Expresses

Following a previous announcement of a new car-sleeper service between Paris and Biarritz, French Railways now announces the introduction next summer of a new twice-weekly car-sleeper express between Paris and Milan giving a connection once a week at Milan with another new car-sleeper express which will run between Milan and Brindisi.

U.S. Railroad Merger Move

The Illinois Central Railroad has applied to the Interstate Commerce Commission for authority to acquire stock control of the Louisville and Nashville Railroad. The Illinois Central recently was given permission by the Commission to intervene in the proposed merger of the Seaboard Airline Railroad and the Atlantic Coast Line. The Illinois Central contends that a merger of these two railroads would be detrimental to its competitive position.

Canal for National Trust

An enabling clause in this year's British Transport Commission Bill permits the B.T.C. to lease the southern section of the Stratford-on-Avon Canal, 13 miles long, to the National Trust. Pending the operation of the lease the Commission has agreed to preliminary work towards restoration of small boat traffic. This is being undertaken by voluntary labour provided by the Stratford-on-Avon Canal Society. The National Trust is seeking funds for the full restoration of the canal.

Further 19 miles of Motorway

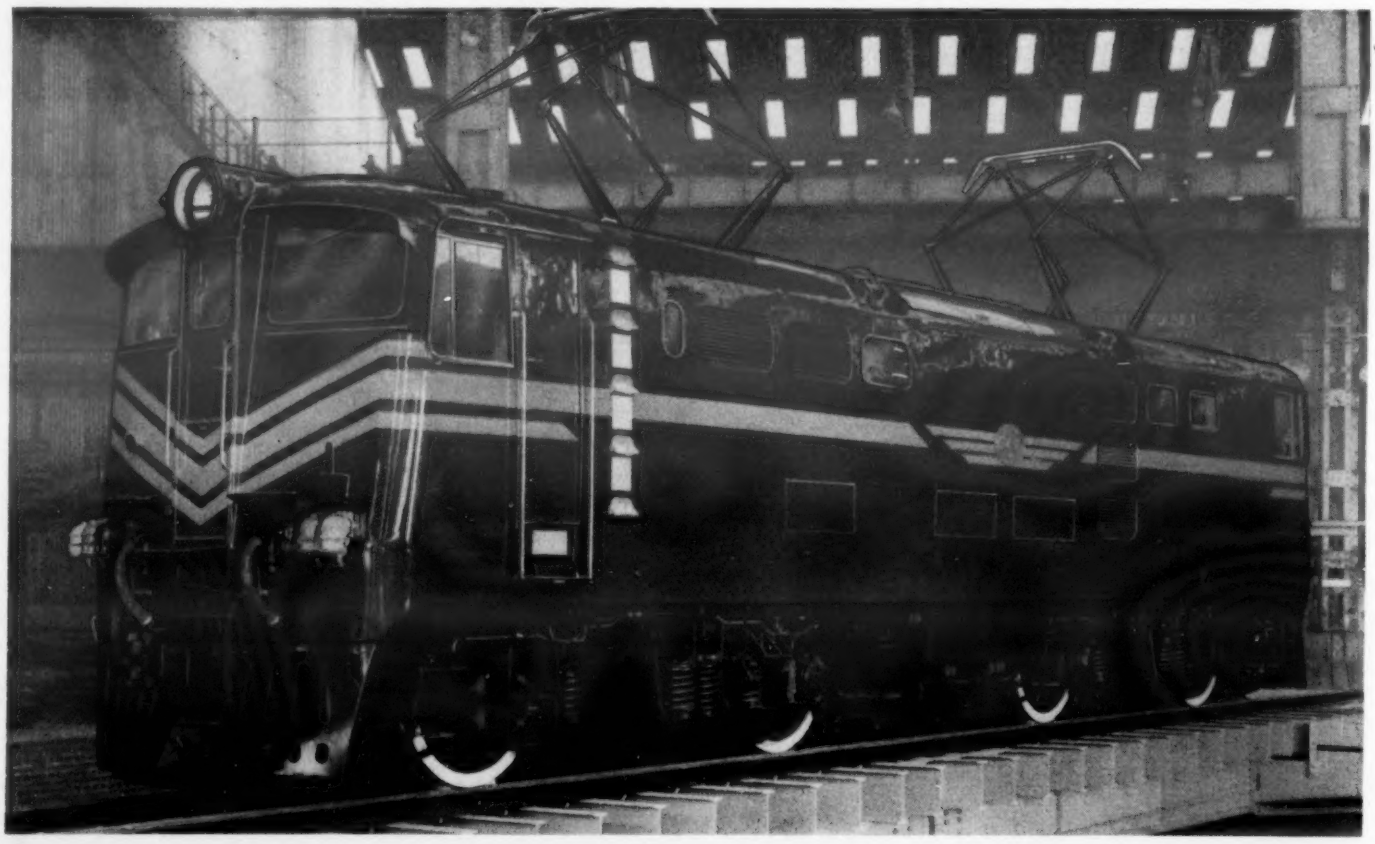
Contracts for building a further 19 miles of the Birmingham—Preston motorway, between the northern end of the Stafford by-pass and the Cheshire boundary near Talke, are about to be let. There will be only one intermediate access point, at Hanchurch, near Stoke-on-Trent. The major viaducts and rail bridges throughout the remaining section of motorway between Dunston and Preston are already under construction and a contract for the seven miles by-pass of Stafford was let in June this year. It is hoped that the entire Dunston to Preston motorway, ultimate extension of the present M1, will be opened by mid-1963. The next section to be tendered for will be Warrington—Preston and the intervening section in Cheshire will complete the picture.

Leeds Station Rebuilding

Preliminary stages of the reconstruction work in connection with the combination of Leeds City and Leeds Central passenger stations are now well advanced and the next stages are shortly to begin. These will cause some temporary inconvenience to passengers, for example, trains leaving from different platforms owing to permanent way moves. In January, the work of taking down certain areas of existing station roof and the demolition of two old office structures in the south concourse will begin in preparation for the erection of the first of the new south concourse structures and the multi-storey office block. This work, and the construction work which is to follow, will cause some unavoidable inconvenience to passengers and the availability of car parking space will be very limited. Restrictions on traffic will also be inevitable in the station approach and elsewhere.

35 type 5.E.I. Electric Locomotives are being manufactured by Metro-Cammell for The South African Railways.

(Main Contractors A.E.I. Ltd.)



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COMMERCIAL AVIATION

Record Channel Vehicle Traffic

B.E.A. VANGUARDS IN SPRING

OVER 90,000 cars crossed the Channel on Silver City Airways vehicle ferries in the financial year ended September 30 last, an increase of 23,000 over the previous corresponding 12-month period. Announcing provisional figures, the airline stated that vehicle traffic rose from 67,452 in 1958-59 to 90,332 in 1959-60—a rise of nearly 30 per cent. Passengers accompanying vehicles totalled nearly 220,000, compared with just over 190,000, and the number of Channel crossings completed by the company's fleet of car-carrying Bristol Superfreighters was 40,000 as against 29,000 12 months earlier. Total freight uplifted jumped by some 35 per cent from 102,156 tons to a record 135,607—probably a world record for any airline. The most spectacular car traffic increases of the year were on the ferries from Manston to Ostend and from Hurn (Bournemouth) to Cherbourg. Ostend traffic doubled, while on the Cherbourg route the total came to well over 10,000 cars for the first time. Last year's figure for the route was 7,400.

Traffic by U.K. Airlines in August

It is provisionally estimated from statistical returns received to date that United Kingdom airlines traffic on scheduled and inclusive tour services in August amounted to 59 million short ton-miles, representing an increase of 21 per cent compared with August last year. Capacity operated increased by 24 per cent and the overall load factor fell from 65 to 64 per cent. In the first eight months of 1960, traffic totalled 332 million short ton-miles compared with 265 and 231 short ton-miles in the first eight months of 1959 and 1958 respectively.

DC8 Air Liners for Brazil

The Export-Import Bank of Washington has approved a loan of $13.8 million for participation with the Douglas Aircraft Company in the sale of two DC air liners to Panair do Brasil, an affiliate of Pan American Airways. The total cost of the two aircraft and equipment will be over $20m., they will be Panair's first operational jets and will go into scheduled service between major points in South America as well as overseas to Lisbon, Madrid, Paris, London, Frankfurt, Rome, Zurich and Beirut.

First Boeing Jet for Aer Lingus

Aer Lingus—Irish International Airlines—took delivery of its first Boeing 720·048 air liner on October 25 in Seattle. The aircraft was accepted by Capt. J. C. Kelly-Rogers, the airline's deputy general manager. Following the ceremony, during which it was blessed and named *St. Patrick* by the Archbishop of Seattle, it was flown to Tucson, Arizona, where the 53 Irish pilots and engineers aboard will undergo intensive training. The aircraft will arrive in Dublin on November 18 and is to enter scheduled service on the North Atlantic route on December 14.

New J.A.L. Services

Latest move in Japan Air Lines expansion plans comes with the announcement of a new non-stop service between Tokyo and Hong Kong started on November 1 and a new Tokyo—Seattle service started on November 2, both with Douglas DC8 jet aircraft. Flights will leave Tokyo every Tuesday and Friday at 9.30 a.m., returning on the same days, leaving Hong Kong at 2.30 p.m. Southbound flying time is 4½ hr. and northbound 3 hr. 35 min. Flying time from Japan to the U.S. over the Great Circle route will be 9 hr. 20 min. and from Seattle to Tokyo 11 hr. 10 min. Two round trips a week will leave Tokyo every Wednesday and Saturday at 10 p.m. and Seattle on Thursdays and Sundays at 1 a.m. All flights between Tokyo and Seattle will refuel at Anchorage.

Dubai Airport Opened

The new international civil airport in the Arabian Gulf, planned and managed by International Aeradio, Limited, on behalf of the Ruler of Bubai, was officially opened this autumn. The opening ceremony was performed by H.E. Shaikh Rashid Bin Said Al Maktoum, the Ruler of Dubai, who was received by Mr. G. R. Scott-Farnie, managing director of International Aeradio. The airport, which has been designed to allow for ease of future expansion, is capable of receiving aircraft up to and including Dakotas; it has a 6,000-ft. runway, taxitrack, aircraft apron, terminal building and associated services and technical equipment. As well as airport management, International Aeradio is responsible for air traffic control and airport fire services.

Vanguards on Domestic Routes in Spring

In a recent message to British European Airways staff, Lord Douglas revealed that the 105-seat 425-m.p.h. Vickers Vanguard turboprop airliner will be put into service on B.E.A.'s domestic trunk routes very shortly after being delivered. Present plans for the Vanguards include a twice a day service between London and Glasgow from April 1, increasing to five round trips a day from August 1, when a daily round trip between London and Edinburgh will also be started. It is also planned to provide Belfast with a morning and evening Vanguard flight from London from July 1. The Vanguard, 20 of which are on order for B.E.A., will accommodate 26 first-class and 79 tourist-class passengers. Its introduction between London, Glasgow, Edinburgh and Belfast will reduce the flying time by 10 min. on each route.

Rolls-Royce Engines for Light Aircraft

The Continental Motors Corporation, Muskegon, Michigan, U.S.A., and Rolls-Royce, Limited, Derby, have signed a licence agreement covering the full range of Continental aircraft piston engines. The probability of such an agreement was referred to on September 3 in MODERN TRANSPORT in an article on the projected Short SC7 Skyvan, which will have two 390-h.p. Continental engines. Rolls-Royce will be able to supply the full range of Continental engines and spare parts and will provide full after-sales service. The licence gives Rolls-Royce exclusive rights for all Continental piston engines and spares in Europe and for Rolls-Royce built Continental engines in Australia and New Zealand. Production facilities will be established by Rolls-Royce for any of the range for which a sufficient market is foreseen in the assigned territories. Early delivery of Continental-built engines through Rolls-Royce will be possible while production in Britain is being established. British-made parts and engines will be incorporated into the delivery programme as they become available. All parts manufactured by Rolls-Royce will be fully interchangeable with those from the U.S.A.

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The late Mr. CLAUD BARRINGTON, M.I.Mech.E., M.Inst.T.

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We record with regret the death, on October 31, of Mr. Claud Barrington, a part-time member of the board of management of British Road Services, chairman of B.R.S. (Pickfords), Limited, and, since last January, chairman also of the Atlantic Steam Navigation Co., Limited. He was born at Portishead, Somerset, in 1893, and educated at Colston School, Stapleton. He was trained as a mechanical engineer with Stothert and Pitt, Limited, Bath. He was commissioned from Bristol University O.T.C. in the Gloucestershire Regiment in 1914. After being wounded on the Somme in 1916 and transferred to the Royal Engineers, he became Chief Inspector for the Scottish area for the Department of Inland Waterways and Docks (R.E.). Later he was seconded to the Air Ministry and became Officer-in-Charge of heavy plant repair stores depot at West Drayton of the Works and Building Department. Entering road haulage in Bristol in 1921, Mr. Barrington later became a director of Carey, Davis and Thomas, Limited, in association with the late Major E. C. Thomas. From those days, he felt that the future development of goods road transport lay in the grouping of such concerns, but with the retention of their individuality. In 1936 he became joint managing director of Transport Services, Limited, a public company having £1,250,000 authorised capital and becoming the holding company of a number of goods road transport concerns, under the chairmanship of Mr. H. C. Drayton. In 1941 Mr. Barrington became Chief Road Haulage Officer under the Ministry Road Haulage Organisation and in 1942 Director of the Road Haulage Branch of the Road Transport Division, Ministry of War Transport. He was made a director of the Road Haulage Organisation on its formation but resigned in 1944 owing to ill health, returning later to the managing directorship of Transport Services, Limited. When, in 1948, the company was sold to the British Transport Commission he became a full-time member of the Road Transport Executive, continuing as such when it became the Road Haulage Executive and later the B.R.S. Board of Management; he relinquished full-time membership last January. He showed a lively interest in development of goods road transport trade associations and in the Road and Rail Central Conference. He was also formerly a member of the Road Haulage Consultative Committee, vice-chairman of the Standing Joint Committee of Road Hauliers' National Organisations and a vice-chairman of the Commercial Motor Users Association. An underwriting member of Lloyds, his experience as both civil servant and road transport manager made him particularly suited to guide and advise in a period of extensive change in an industry with wide ramifications.

IN PARLIAMENT

Tyne Tunnel Tenders

G.V. PLATING TALKS SOON

THE Joint Parliamentary Secretary to the Ministry of Transport, MR. JOHN HAY, told a questioner that the Tyne Tunnel Joint Committee proposes to invite tenders for the boring of the tunnel soon, and it expects work to start early next year. The tunnel and its approach roads should be completed within six years. The tolls have not yet been decided.

Plating Discussions Shortly

Replying to a question about the dangers of overloaded goods vehicles, MR. JOHN HAY said that in 1958, 353 accidents were reported by the police as attributable to overloading, or to shifted or defective load; they expected shortly to discuss with the Society of Motor Manufacturers and Traders a scheme under which the maximum permitted weight would be displayed on an embossed plate on every goods vehicle.

Vehicle Noise Tests

With the full co-operation of the Motor Industry Research Association, the Ministry of Transport, the manufacturers and the National Physical Laboratory have been engaged on tests on the lines of the draft International Standards Organisation proposals for methods of measuring vehicle noise, using a meter showing the sound level in decibels. Further tests have been arranged this month for motor vehicles, said MR. JOHN HAY. MR. ERNEST MARPLES added that they were trying to establish maximum sound levels and standard methods of measurement.

Blackfriars Underpass

SIR WAVELL WAKEFIELD asked the Minister of Transport when measures will be taken to relieve the congestion at peak hours at the northern end of Blackfriars Bridge. MR. ERNEST MARPLES said he had invited the Corporation of London to submit for his approval in the next financial year a scheme which would include an east-west underpass beneath the road and railway bridges. The cost was at present estimated at £2,900,000, on which a grant of nearly £2,200,000 would be payable. Meanwhile, experimental restrictions on waiting near this bridgehead have been introduced.

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BIRFIELD GROUP DEVELOPMENT

New Divisional Centres

FROM Monday, November 7, the headquarters of the Birfield group of companies is located at its new London offices at 20 Hill Street, London, W.1. The telegraphic address becomes Beltistos, Audley, London, but the telephone number is unchanged at Grosvenor 7090.

This move from the group's premises at Stratford House, London, W.1, is a natural consequence of the planned reorganisation that has taken place over the past 12 months. It follows very closely the news that major units of the motor industry will become established in the North of England and Scotland. This will mean that Birmingham will become the logical geographical centre of the industry and is one of the reasons why the headquarters of the Birfield Automotive Division is moving there. This also takes effect from November 7 and at the same time the group Railway Division headquarters will move to Sheffield, close to the centre of the British rolling stock industry.

The new headquarters of the Birfield Automotive Division, under the direction of Mr. E. J. Power, will be at Chester Road, Birmingham; telephone Erdington 2191. The Railway Division headquarters will now be located at Victoria Works, Millhouses, Sheffield, 8; telephone Sheffield 364411. Director of the Division is Mr. L. W. Harding; general sales manager is Mr. H. B. White, who will be based at the company's London office. In future sales of general engineering products will be dealt with by individual Birfield companies.

Dubbed Auto-Aspirateur by the French public, to whom it was introduced at the recent Paris Motor Show, the coin-operated self-service vehicle-interior suction cleaner developed by Vacmobile Manufacturing Co., Limited, Old Oak Common Lane, London, N.W.10, is shortly to go into service at garages in Paris. Over 100 serious sales inquiries were received during the course of the show and two machines were purchased off the stand.

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FORTHCOMING EVENTS

November 7.—Inst.T. (Darlington). B. H. Clegg, "The British Transport Commission Legal Service." United House, Darlington. 7 p.m.

Inst.T. (Sheffield). S. Rawlings Smith, "The Work of Trinity House and its contribution to Safety at Sea." Royal Victoria Hotel, Sheffield. 7.30 p.m.

November 8.—Inst.T. (Yorks.). Wing Commander R. A. C. Brie, "Helicopter Inter-City Transport." Griffin Hotel, Boar Lane, Leeds 1. 6.30 p.m.

Inst.T. (North Staffordshire). W. R. Good, "Tyres." Grand Hotel, Hanley. 6.30 p.m.

Inst.T. (Edinburgh). M. C. White, "Seaports—the Link." 23 Waterloo Place, Edinburgh. 5.30 p.m.

I.Mech.E. Dr. A. E. W. Austen, B. E. Knight, Dr. W. T. Lyon and Dr. T. Priede. Four papers on "Fuel Injection Combustion and Noise." 1 Birdcage Walk, S.W.1. 4.30 p.m.

Air League of the British Empire. Luncheon. Mansion House, E.C.4. 12.30 for 1 p.m.

November 9.—I.R.S.E. Dipl-Ing. K. F. Kummell, "Development and Application of New Signalling Layouts in Germany." Savoy Place, W.C.2. 6 p.m.

R.S.A. Thomas Gray Memorial Lecture. Captain G. W. Wakeford, "The Training of Officers for the Merchant Navy." John Adam Street, W.C.2. 2.30 p.m.

I.R.T.E. (North Western). H. L. Lyons-Jones, "Transport in Tripolitania." Merton Hotel, Merton Road, Bootle, Liverpool 20. 7.30 p.m.

I.R.T.E. (Southern). T. G. Charlesworth, "Recent Developments in Fuel Injection Pump Design." Cambridge Hotel, Southsea. 7.30 p.m.

L.R.T.L. P. Brixey, "Australian Tramways." 153 Drummond Street, N.W.1. 7 p.m.

November 10.—Inst.C.E. Discussion. P. Wainwright, "The Economics of Airlifts for Major Construction." Great George Street, S.W.1. 5.30 p.m.

L.M.R.L.D.S. H. A. Timms, "The Port of London." Burnley.

L.M.R.L.D.S. Sir Reginald Wilson, "The Future of Transport." Friends House, Euston Road, N.W.1.

L.R.T.L. Ciné film by H. Luff, "On Rails in the Pyrenees." 153 Drummond Street, N.W.1. 7 p.m.

November 11.—Inst.T. (Northern). Dr. T. E. H. Williams, "Urban Traffic Problems." Royal Station Hotel, Newcastle. 7 p.m.

Inst.T. (Swindon). G. Hudson-Efford, "Continental Container Services." Engineering Society's Rooms, Emlyn Square, Swindon. 7.15 p.m.

Inst.T. (East Midlands). Annual dinner. Grand Hotel, Leicester. 6.45 for 7.15 p.m.

Inst.T. (Merseyside). Annual dinner and visit of president. Adelphi Hotel, Liverpool. 7 for 7.30 p.m.

I.R.T.E. (South Wales). P. H. Wyke Smith, "Taking Stock on Maintenance." South Wales Institute of Engineers, Park Place, Cardiff. 7.15 p.m.

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SALVAGE VEHICLE

For Johannesburg Fire Department

TRAFFIC and railway accidents, or any other emergencies, occurring in Johannesburg will now receive effective assistance from a new six-wheel Leyland Hippo salvage vehicle which has just been delivered to the municipality's fire department. Based on a 13 ft. 6 in. wheelbase chassis powered by a 150-h.p. Leyland diesel engine, it carries bodywork and equipment installed by Duncan Andrew Engineers (Pty.), Limited, Johannesburg. The body contains seating for up to six men; underneath the seats are lockers containing snatch blocks, various hand tools and other first-aid equipment. Picks and hammers are carried on the locker doors.

Leyland Hippo salvage vehicle recently delivered to Johannesburg Fire Department; right, the 8-ton Harvey Frost crane, vehicle ambulance and Darlington crane forming part of the equipment

Mounted on the forward part of the deck is a Darlington winch operated from a gearbox power take-off capable of exerting a front or rear pull of 25,000 lb. Immediately behind the winch is a steel locker containing sling chains, while at the rear of the vehicle is a Harvey Frost 8-ton crane. An 8-ton salvage ambulance is housed amidships and can be removed by the crane.

A fixed 1,000-watt floodlight carried on the roof of the cab and three other similar lights housed behind the cab are supplied with current by a R.Y.A. generating set driven by a Ruston air-cooled engine housed under the crew accommodation. An additional spotlight on the cab roof is operated from the vehicle battery. The three rear floodlights each have a 100-ft. reel of cable and can be removed and fitted on stands.

A weatherproof compartment houses a two-way radio, with hand microphone in the cab. Current for charging the separate 12-volt battery of the radio is obtained through a rectifier from a Leece-Neville alternator driven by a power take-off from the engine. Lockers at the rear of the body contain oxy-acetylene equipment. An electric siren and hand-operated clarion bell are fitted to give other road users warning of approach.

SIGNAL ENGINEERS

Annual Dinner

ON Friday of last week the Institution of Railway Signal Engineers held its annual dinner and dance in London, with the president, Mr. W. Owen, in the chair. "The Institution" was proposed by Mr. L. C. Hawkins, a member of the London Transport Executive, who drew the contrast between 1912, the year of the Institution's foundation, and today. Then motor cars were few and far between, one used the telephone only in emergency, and the air speed record was 89 m.p.h. The Railophone was the subject of experiment at Stratford-on-Avon and the weather was reported to be unseasonable. It took three months to send a letter to Australia and get a reply. Since then, although there had been no major change in the central area of the underground system in London, the number of passengers had multiplied and that could be attributed to the efforts of the railway signal engineer, the manufacturers of equipment and the operators. The bus was an individualistic business, but the man in charge of a train was part of a disciplined team; the express train driver relied on the signals above all else.

Education

In his reply Mr. Owen wished "dry weather and a good changeover" for their colleagues working at Glasgow Central Station—the sort of occasion when the operating man hoped for the best and the signal engineer feared the worst. They were concerned about the young people entering their profession and hoped they would learn by means of the papers and visits. They were also concerned about costs and the Institution's committee on standardisation and miniaturisation was engaged in work leading towards cost reduction. One of the 11 new educational booklets would soon be on the way to the printer. He paid a tribute to the backroom boys of the Institution including particularly the late Mr. T. S. Lascelles, a pillar of their foundation, and to the council, committees and secretaries. The Institution did not give its members very much unless they put into it quite a lot.

Mr. F. G. Hathaway, the senior vice-president, proposed "The Guests" and welcomed Mr. Alan Baker, the signal engineer of the Rhodesian Railways; Mr. F. G. Maxwell, operating manager (railways) L.T.E., responded.

From October 25 the address of the registered office of the Marconi International Marine Communication Co., Limited, formerly Marconi House, Strand, London, W.C.2, is Marconi House, Chelmsford, Essex. (Chelmsford 3221.)

T.E.E. TRAINS

(Continued from page 7)

Frankfurt-am-Main, Luxembourg, Basel, Milan and Utrecht. A teleprinter link also connects Liverpool Street Station (London) with these central exchanges via Utrecht. A special T.E.E. code is used which practically rules out the possibility of error. Fares are as for first class travel plus a supplement of about 20 per cent.

T.E.E. NETWORK

Type	*Name*	*From—To*	*Journey Distance miles*	*Journey Time hours*
SNCF	Ile de France	Amsterdam—Paris	338	5.42
		Paris—Amsterdam	338	5.38
DB	Parsifal	Paris—Hamburg	586	9.53
		Hamburg—Paris	586	9.53
FS	Mont-Cenis	Lyon—Milan	290	5.30
		Milan—Lyon	290	5.30
SNCF	Arbalete	Paris—Zurich	384	6.00
		Zurich—Paris	384	6.16
DB	Rhein-Main	Amsterdam—Frankfurt a/M	302	5.18
		Frankfurt a/M—Amsterdam	302	5.17
DB	Helvetia	Hamburg—Zurich	602	10.19
		Zurich—Hamburg	602	10.18
SNCF	Ruhr-Paris	Dortmund—Paris	379	6.35
		Paris—Dortmund	379	6.35
DB	Saphir	Ostend—Cologne—Frankfurt a/M	351	6.19
		Frankfurt a/M—Cologne—Ostend	351	6.33
CFF-NS	Edelweiss	Amsterdam—Brussels—Zurich	564	10.00
		Zurich—Brussels—Amsterdam	564	10.05
CFF-NS	Oiseau Bleu	Paris—Brussels	195	2.43
		Brussels—Paris	195	2.54
CFF-NS	Etoile du Nord	Amsterdam—Brussels—Paris	338	5.39
		Paris—Brussels—Amsterdam	338	5.34
FS	Ligure	Milan—Marseilles	348	7.00
		Marseilles—Milan	348	7.10
FS	Medio-lanum	Milan—Munich	372	7.06
		Munich—Milan	372	7.16
FS	Lemano	Milan—Genoa	233	4.17
		Genoa—Milan	233	4.11

It is now rather more than three years since the introduction of the first T.E.E. trains. During that time they have been favourably received by the public and have acquired a unique reputation as a means of international travel. A film is now available in England through the Eastern Region showing the value of the facility. With regard to the future, additional services will soon be running. Steady progress is being made with European railway electrification, but there is at present no standard voltage. The technical problems of change of voltage are being overcome and multiple-unit electric T.E.E. trains are being developed. Alternatively electric locomotives might be used to haul standard stock. This would enable the formation of trains to be varied to meet changing needs.

The Glasgow suburban electrification north of the Clyde is being opened by Sir Brian Robertson, chairman of the British Transport Commission, on November 5 and full public service begins on November 7. The six-car train seen above is near Craigendoran

Sitting Pretty

This prototype seat is a fine example of co-operation between the Chief Designer of Pel Ltd., and the Bintex Design Service.

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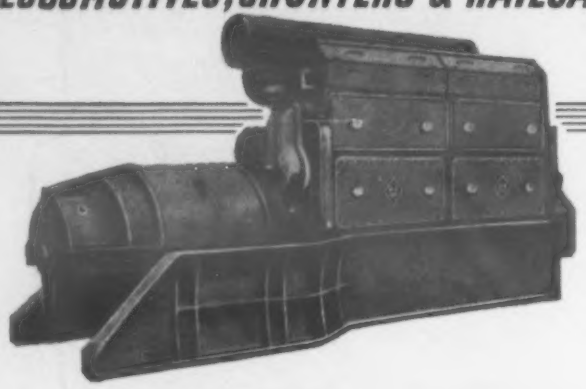

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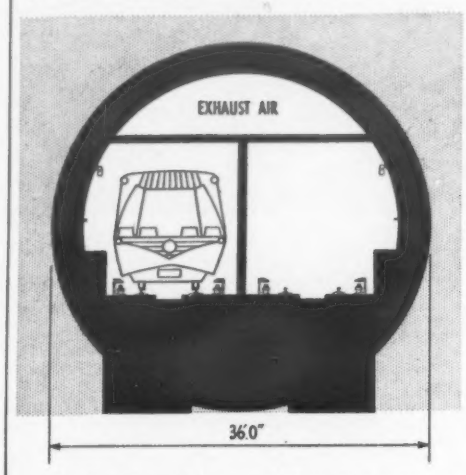
EARTHQUAKE-PROOF TUBE

For San Francisco

DETAILS are now available of the four-mile underwater link in the proposed 100-mile rapid transit system now being designed for the San Francisco Bay region (MODERN TRANSPORT, August 6). Unlike London's tubes, which were driven through London clay beneath the bed of the Thames, the 35-ft. diameter Transbay tube will be built up from prefabricated steel sections, floated to the site and lowered to the bed of the Bay. There the entire tube will be assembled in a shallow ditch dredged out of the floor of the Bay, after which sand and mud will be put back over the tube to give it added weight and stability.

Estimates prepared by Parsons Brinckerhoff-Tudor-Bechtel, the joint group of consultants retained by the five-county Bay Area Rapid Transit District for the project, put the cost of the tube, together with nearly two miles of approaches, at $127,191,000 (almost £45½ million). The money has already been authorised by the California Legislature, to be taken from surplus tolls collected on the Bay Bridge. The Transbay Tube will run from a point directly beneath the San Francisco Ferry Building to an eastern portal located on the Oakland Mole. It will pass under the Bay Bridge midway between San Francisco and Yerba Buena Island. At its lowest point it will be 110 ft. below the surface of the water.



Section through proposed Transbay tube

The tube will be built from 62 sections, each 300 ft. long. They will be made from welded steel plates attached and reinforced with steel rings and concrete. According to the consulting engineers, individual sections can be made at the various shipyards and drydocks in the Bay Area. Before being floated to the site, each section will be sealed with watertight bulkheads at both ends, to be removed after the sections have been welded together by divers working at the bottom of the bay. After the entire tube has been assembled, the interior will be completed and a concrete wall and ceiling constructed to separate the two tracks and provide an exhaust duct respectively. Finally the tracks and control equipment will be installed.

To connect the tube with the proposed Market Street Subway, a link will be driven beneath the Ferry Building. On the Oakland side of the bay cut-and-cover construction will be used. At two points halfway across the bay wider sections will be inserted to house electrical sub-stations. Forced air ventilation would be provided by the movement of the trains, with fresh air being fed into the tube from ventilation plant near the portals.

High-speed Operation

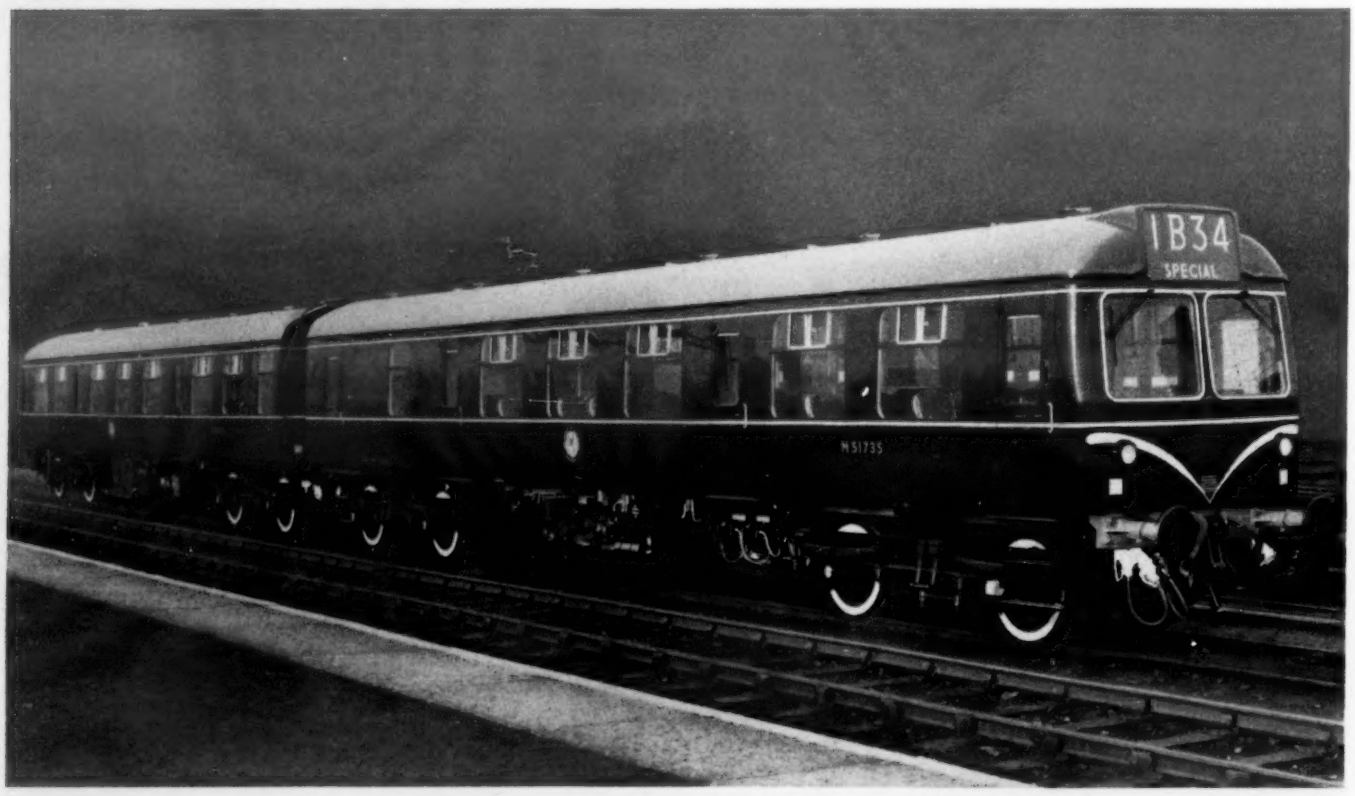
Present plans provide for trains to run through the tube at 65 m.p.h., covering the section between the two-level stations under San Francisco's Market and Powell Streets and Broadway and 12th Street in Oakland in just under 11 minutes, as compared with the present peak-hour travel time between these two points of more than 40 minutes. Elsewhere on the proposed rapid transit system top speeds of trains will be up to 80 m.p.h. Planning the work involved the most exhaustive tests yet made on the effects of earthquake action. Several of the world's leading seismologists participated in the studies, which were conducted by Dr. George W. Housner and Professor J. Converse, both of the California Institute of Technology. Also participating were Dr. Perry Byerly, of the University of California, and various seismologists of the United States Coast and Geodetic Survey. One phase of the studies included the installation of special underwater seismic instruments buried in the rock and mud at the bottom of the bay. Seismic information will continue to be transmitted electronically from these instruments to recorders located in the offices of the Bechtel Corporation in San Francisco until after construction begins.

According to this group of experts, the proposed Transbay tube will be capable of withstanding any conceivable earthquake shock. Tests have determined that the mud in which the tube will rest will not turn to liquid under earthquake conditions. During the tests various earthquake waves were simulated—transverse, vertical, angular—and none had a critical effect on tube design criteria. Some underpinning of the San Francisco Ferry Building, noted for having withstood the historic earthquake of 1906, will be necessary.

The tube project will take about four years to complete, but construction will not begin until voters in the Bay Area Rapid Transit District have approved the issue of bonds to finance the remainder of the proposed rapid transit network. Figures issued last month by the B.A.R.T.D.'s consulting engineers show that 12,873 private cars crossed the Bay Bridge into San Francisco on a weekday morning in 1959, an increase of 34 per cent over the total for the same day in 1954. Even if no further increase takes place in the next four years, and there are no grounds whatsoever for presupposing such a state of affairs, there should be no lack of passengers for the Transbay Tube when it is eventually completed.

CRAVEN-DIESEL

Torque Converter Rail-Cars
with Rolls-Royce Engines



These twin units are part of a fleet of 405 railcars built by Cravens for the British Railways modernisation programme. Each car is fitted with an 8 cylinder 238 B.H.P. Rolls-Royce engine and Twin Disc Torque Convertor.

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SHEFFIELD

ROAD RESEARCH

New Track at Crowthorne Commissioned

SIR WILLIAM GLANVILLE ON FACILITIES AND AIMS

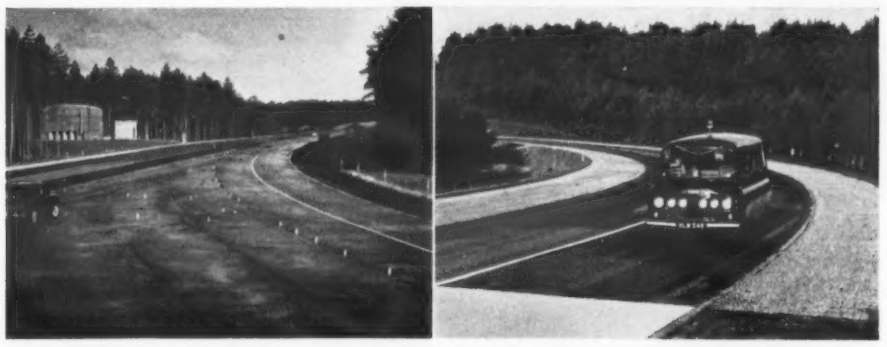
Higher speeds, increasing traffic and the special problems of motorways and other modern roadworks are some of the factors necessitating large-scale practical road research, to help meet which a new track has been built at a cost of about £500,000 at Crowthorne, Berks, details of which were given in our issue dated June 25. By 1964, the new site will also house the entire Road Research Laboratory of the Department of Scientific and Industrial Research, which at present occupies two different centres at Harmondsworth, Middlesex and Langley, Bucks. The accompanying article is an abstract of the speech made by Sir William Glanville, Director of Road Research, when the new track was commissioned on October 25.

IN common with all other highly-developed countries, we are in process of a transformation in which the motor vehicle is fast becoming every-man's means of transport, both for business and private purposes. Every 10 years the number of vehicles on our roads doubles and congestion grows at an even faster rate. Roads are expensive to build and maintain and although we spend about £190 million a year on them, that is only a fraction of the money which the country is now spending annually on road transport and travel. Meanwhile vehicles become more powerful and travel faster and accidents are a growing problem.

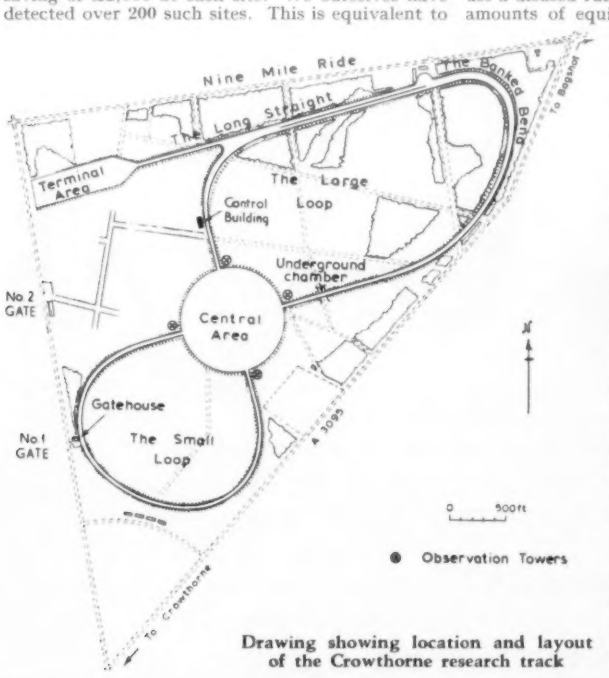
The job of this research organisation is to find practicable ways of cutting down the number of road accidents, to save the country money by discovering the most economical ways of building roads and to save time and money by showing where and how best to build new roads and to improve existing ones so as to reduce the delays and congestion to a minimum.

Profitable Investment

Road Research has proved a very profitable investment for the nation and, in addition to the savings in human life from the accidents prevented, the sum saved annually as a result of applying the lessons of research are a great many times its cost. As an example of these benefits, I will quote the case of sites at which skidding accidents have been frequent. Every year the Road Research Laboratory deals with many such sites and helps the highway authority to remedy them, often by a very inexpensive treatment of the road surface. An estimate was made of the savings in accidents at a number of such sites and the economic savings equivalent to this work out at an annual net saving of £2,000 at each site. We ourselves have detected over 200 such sites. This is equivalent to an annual saving of £400,000. We have also helped the highway authorities to find and treat other sites of this kind and the total savings must be many millions of pounds.



Two views of the new Crowthorne track showing part of the high-speed straight, with tank serving the road-watering equipment, and terminal boxes at the side of the loop track for subsurface vehicle guidance and detection wiring; right, a Morris 15-cwt. with special headlamp rig for vehicle lighting and dazzle experiments on the vari-coloured section used also for study of street lighting



Drawing showing location and layout of the Crowthorne research track

To give some idea of how small is the expenditure needed to achieve this result I can mention one road junction controlled by traffic lights. There, the cost of resurfacing, which prevented about 10 accidents a year, was not more than had formerly been spent annually in replacing traffic signals and bollards damaged in these accidents.

Similar work that the laboratory does on airfield runways can also show improved safety, bearing in mind that overshooting on a wet runway is a great danger and that one such accident has been estimated to have cost half a million pounds.

Scientific Basis

In the past many decisions affecting expenditure on roads and the action to be taken in given circumstances had to be based on ad hoc judgments and on opinions formed from limited personal observation. Obviously errors were made, but with carefully conducted research, often of a statistical character, such decisions can be scientifically based. Thus, for example, it was thought at one time that a very rough-looking surface was the best that could be put on a road to prevent skidding and hundreds of thousands of pounds must have been spent on resurfacing roads to make them knobbly. Research however showed that some stones polished very quickly and this has led to a complete re-appraisal of the techniques for producing road surfaces.

A Bedford lorry in the R.R.L. test fleet equipped as a mobile laboratory is fitted with an additional retractable wheel for studying tyre behaviour; there is a built-in watering system for wet-road effects

Much of this research requires work on a large scale under controlled conditions. Before the war a short experimental track was built at Harmondsworth, mainly with the object of providing a controlled site for skidding tests. This proved invaluable, but after the war when research on traffic and safety was begun over a wider field, it proved quite inadequate. Since the war we have made extensive use of facilities made temporarily available at various airfields and by the Motor Industry Research Association on its test circuit. To do this work in scattered places proved very expensive and time consuming.

During the last five years or so we have had to use a disused runway 50 miles away to which large amounts of equipment and staff had to be conveyed, and where moreover the research facilities were by no means adequate. Worse still, many important experiments could not be done because facilities could not be found. For these reasons it was decided to build this special road research track. Without the track we have had, as I have said, to employ airfields and we have had the use of those at Northolt and Hendon for certain traffic experiments. On the apron at Northolt, for example, we carried out a few years ago full-scale trials of various roundabout layouts and controlled intersections, the results of which have since been extensively used in the design of new road layouts. At Hendon we studied and compared the virtues of various forms of road signs which led to the adoption by the Ministry of Transport of the signs now used on motorways.

Unique Facility

Now I would like to say a few words about the track and the objects we had in view in designing it, for it is unique—there is no other track of its kind devoted to research into road traffic and safety problems in Europe, nor indeed in the world. The main objects in designing the track were:

(1) To provide large flat areas with suitable approach roads to enable the stability of vehicles performing manoeuvres involving steering, braking and accelerating at normal road speeds to be investigated.
(2) To provide facilities for studying the skidding properties of wet surfaces, in particular the material and texture used for the surfaces, the effect of the properties of the tyre and the type of vehicle, its speed and braking system.
(3) To enable vehicle lighting tests to be carried out on straight and curved roads with surfaces of various types and colours.
(4) To enable crash-injury research to be conducted under appropriate conditions.
(5) To enable comparisons of street lighting systems to be made under controlled conditions.
(6) To provide a continuous circuit round which vehicles can be driven while the actions and reactions of their drivers are studied.
(7) To provide facilities for traffic tests of intersection layouts, traffic signals, road signs, safety barriers and other aids to traffic flow.
(8) To provide facilities for the study of vehicle guidance and the many other matters with which the laboratory is concerned.

In framing the programme of research, we enjoy the advice of the Road Research Board and its

(*Continued on page* 16)

I-was-driving-before-you-were-born

There are lots of different kinds of driver on the road. A good many different kinds of fuel too. The safest thing to do is to stick to BP Diesel—available at Agency sites throughout Britain. With a Diesel Agency card issued by Shell-Mex and B.P. Ltd your drivers can fill up with BP Diesel on credit, or cash at agency rates.

BP DIESEL

PETROL AGENCY DERV

THIS IS THE SIGN THEY SHOULD LOOK FOR

The Firestone *dual-purpose* All-Traction Heavy Duty Truck tyre gives longer mileage *on* the road and better performance with greater efficiency *off* the road.

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Long run or short, it will serve you well!

Special Bodywork by Normand Ltd.

KARRIER 'BANTAM'

2-3 TONNER Petrol or Diesel

THIS POPULAR, versatile and extremely manoeuvrable forward-control vehicle is adaptable either as a van, lorry or tipper. Light, strong and well proportioned, its wide-vision cab provides exceptional driving comfort. At the same time its low-cost running and maintenance make it a most practical and profitable investment.

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* **Fully-proved light diesel engine developing 54 b.h.p; or 4 cyl. o.h.v. petrol engine, with long-life chrome bores, developing 53.5 b.h.p.**
* **Full-forward control with over 11′ bodyspace on 8′ 2″ w.b. chassis or over 14′ bodyspace on 10′ 2″ w.b. chassis.**
* **Exceptional manoeuvrability. Supreme driver comfort in all-steel cab with panoramic windscreen. Powerful hydraulic brakes.**

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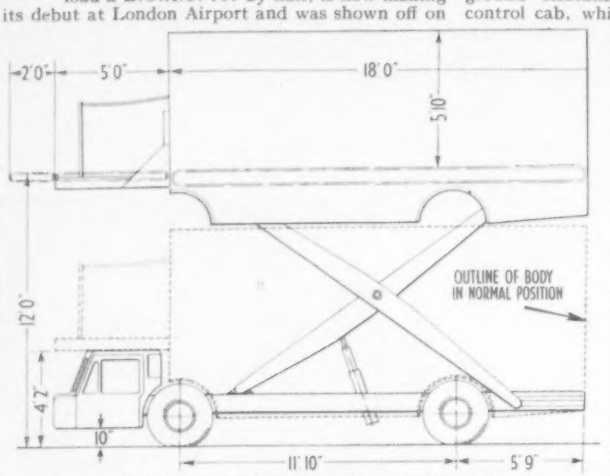
LOADING LARGE AIRCRAFT

B.O.A.C. Uses Douglas Cargomaster

A LARGE cargo loader, the Douglas Cargomaster, which can cut the time needed to load a B.O.A.C. 707 by half, is now making its debut at London Airport and was shown off on Tuesday of this week. B.O.A.C. has ordered three of these vehicles, which are specially designed for loading the holds of large modern jetliners.



Plan and elevation of aircraft loading vehicle designed by Douglas Equipment

The Cargomaster is driven from a cab positioned low down on the front of the vehicle. This enables its body to be positioned close against the aeroplane without the cab touching the fuselage. The Cargomaster is designed so that it will adjust its position to load varying types of airliners.

A hydraulic scissor lift enables the body to be raised from 3½ ft. to 12 ft. above the ground. The body floor is made up of two conveyor belts which can work jointly or independently. Extending from the body floor over the top of the driver's cab is a bridge, also fitted with conveyor belts, which will probe right inside the airliner's hold, enabling easier and swifter moving of cargo and baggage.

B.O.A.C. estimates that a complete load of passenger baggage for a 707 jetliner, weighing up to four tons, could be on its way to a Customs Hall within 10 minutes of the airliner coming to a halt on the tarmac.

The Cargomaster is based on a chassis frame of pressed-steel channel sections assembled by bolting and welding. A body length of 18 ft. is obtained on a wheelbase of 11 ft. 10 in. and an overall length of 23 ft. Overall width is 8 ft. and minimum ground clearance under the two-man forward-control cab, which also houses an airfield control radio compartment, is 10 in. Deep sloping windscreens provide better visibility than would be thought possible with such a shallow, low-mounted cab and, indeed, it is easier than might be expected for a large driver to accommodate himself comfortably.

The Douglas Cargomaster at London Airport

Diesel Engine

The power unit is the Perkins C305 six-cylinder diesel engine with near-horizontal cylinder block developed to Rootes' requirements for under-seat mounting in Commer and Karrier forward-control vehicles. The unit develops 87 b.h.p. at 2,400 r.p.m., and 208 lb./ft. torque at 1,300 r.p.m. and has dry type chrome-plated steel cylinder liners. It drives through a 12-in. diameter single dry plate clutch. Commer constant mesh four-speed gearbox and Hardy Spicer open propeller shaft to a spiral bevel back axle with fully-floating half shafts. The hubs are mounted on tapered roller bearings and the axle is fitted with a dustproof breather.

Suspension is by conventional semi-elliptic leaf springs and tyres are 750-20 10-ply rating, twins at the rear. Cam and double roller steering gear is fitted and brakes on all wheels have vacuum-assisted actuation. Equipment includes full road lighting, including flashing direction indicators.

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SOCIAL AND PERSONAL

The Late Sir Cecil Weir

WE regret to record the death, at the age of 70, of Sir Cecil McAlpine Weir, K.C.M.G., K.B.E., M.C. He held a high reputation as an administrator of many offices in which he represented Britain abroad, most notably as economic adviser to the Control Commission for Germany, and also for the energy with which he devoted himself to many offices in this country. He was chairman of the committee for the Scottish Empire Exhibition in 1938. Sir Cecil Weir was a part-time member of the British Transport Commission; he was also chairman of International Computers and Tabulators, Limited, and a director of the Pyrene Co., Limited. A warm tribute was paid to his memory by Sir Brian Robertson in *The Times*.

* * *

Mr. H. H. Jenkins has been appointed district engineer, Cardiff, and Mr. P. Rees district engineer, Shrewsbury, Western Region, B.R.

* * *

We record with regret the death of Mr. R. Crail, a former director and general manager of the Cunard Steam-Ship Co., Limited. He was 77.

* * *

Mr. A. B. Arundale, M.A., has been appointed London district goods manager (located at Broad Street), London Midland Region, B.R. He was educated at Brentwood School and is a former exhibitioner of St. Catharine's College, Cambridge. He started his railway career as a traffic apprentice at Killingworth, Northumberland, in 1946 and was then appointed head of the district passenger manager's development section at Newcastle upon Tyne. Two years later he transferred to York where he was successively head of the combined excursion and programme section in the commercial and operating departments, and head of the newly-formed central timing and diagramming office. In 1955 he was appointed assistant district commercial manager, Norwich. In 1957 Mr. Arundale was appointed sales and development assistant to the line traffic manager (Great Eastern), Liverpool Street, the position he leaves for his new appointment. During the 1939-45 war he served with Coastal Forces in the Royal Navy and attained the rank of lieutenant, being mentioned in dispatches.

Mr. A. B. Arundale

Mr. J. R. Garwood

* * *

Mr. L. J. M. Knotts, formerly signal engineer, Scottish Region, British Railways, has joined Mullard Equipment, Limited. He will act as technical adviser on the application of electronics to railway signalling and communications systems.

* * *

Mr. J. F. Swanborough, general sales manager, is now responsible for all sales, including export and original equipment, for the Avon India Rubber Co., Limited. Mr. A. F. Walsham is appointed home tyre sales manager (replacement).

* * *

The following Southern Region appointments are announced:

Mr. H. C. Walter, assistant (long-term traffic intelligence), to be passenger assistant, Waterloo, vice Mr. J. K. Blue.

Mr. C. W. Ralls, chief clerk, treasurer's department, to be assistant treasurer, vice Mr. C. H. Clarke.

Mr. A. T. Ing, shedmaster, Stewarts Lane, to be assistant to motive power officer Waterloo, vice Mr. G. R. Chrimes, promoted.

We regret to record the death of Mr. H. Lingard, former chief engineer of the Madras and Southern Mahratta Railway.

* * *

Mr. W. K. Cunliffe, who for the last five years has been sales secretary of Leyland Motors, Limited, has been appointed general manager of Leyland Albion (Africa), Limited.

* * *

As part of its policy of keeping key staff in the picture, the Great Northern Line of British Railways has broken new ground by arranging a week's refresher course for some 22 of its controllers—the men who, at line headquarters and in each district (Kings Cross, Doncaster, Lincoln and Sheffield), are responsible for train and traffic control on the line. The course was held at the B.T.C. School of Transport, New Lodge, Windsor. Its object was to discuss future and current problems, with special emphasis on safety, and on the increasing part controllers can and must play in improving punctuality and freight transits, on which the reputation of the line so largely depends. The last day was devoted to syndicate working and there were four lectures on each of the previous four days.

* * *

As announced last week, Mr. J. R. Garwood, M.B.E., M.Inst.T., divisional superintendent, South East division, Central Road Services, London Transport, retired on October 29. Mr. Garwood joined the staff of the London County Council in 1919 and transferred to the tramways department as a conductor two years later. In 1928 he became an inspector and then rose to district inspector and district superintendent. In 1941 he was made an assistant divisional superintendent and in 1948 became divisional superintendent (South) (trams and trolleybuses). When London Transport's road services were combined and reorganised into four divisions in 1950, Mr. Garwood received the appointment he now holds. His work in connection with the planning and putting into operation in his division of the 1950-52 tram conversion scheme was recognised by the award of the M.B.E. in the 1953 New Year Honours List.

* * *

Major General G. N. Russell, C.B., C.B.E., a member of the British Transport Commission and chairman of the Eastern Area Board, has accepted the presidency of the Railway Benevolent Institution for the year 1961 and Mr. K. W. C. Grand, also a member of the Commission, at unanimous request, has accepted the chairmanship for a further year.

* * *

Last week members of the Institution of Locomotive Engineers visited the shipyards and engineering works of the Vickers group in Barrow-in-Furness, by courtesy respectively of Vickers-Armstrongs (Shipbuilders), Limited, and Vickers-Armstrongs (Engineers), Limited. In a singularly well organised three-day programme members stayed at Windermere (where dinners were arranged by Vickers and by Sulzer Bros, London, Limited), toured the Lake District and visited the Barrow shipyard and *Oriana* and the engineering works where construction of Sulzer railway traction engines of 1,160 h.p., 1,550 h.p. and 2,500 h.p. is in full swing. Some 8,000 men work here on a wide variety of engineering, compared with 4,500 in the shipyard.

Mr. G. F. Fiennes, line traffic manager, Great Northern Line (front row, centre) with a group of his officers, backed by some of the traffic controllers from that line at Windsor

Senior operational research officer of British European Airways, Mr. Alec Lee has become the first person outside the United States to win the Lanchester prize, awarded annually by the John Hopkins University of America. The prize, 1,000 dollars and a plaque, is made to the author of the best paper in the English language on the subject of operational research. Mr. Lee's paper, "Some Aspects of a Control and Communications System," was based on his studies on the B.E.A. apron control unit at London Airport Central.

* * *

Mr. G. P. Stuart Clark, M.Inst.T., indoor superintendent, Central Road Services, London Transport, retired on October 29. Reference to this and the ensuing reorganisation of Central Area operating divisions appeared last week. Mr. Stuart Clark was educated at Dulwich College and King's College, London University. In the early months of the 1914-18 war he served as an apprentice with the Daimler Co., Limited, but was commissioned in the Army Service Corps (Mechanical Transport). He was demobilised with the rank of captain. He became a mechanical assistant in training with the L.G.O.C. in 1920. He was made a divisional inspector in 1921 and in 1925, when the L.G.O.C. adopted a divisional organisation, he was appointed one of the first three divisional superintendents, being placed in charge of the Southern division. In 1939, after other positions, he was appointed indoor superintendent (Central Buses). Mr. Stuart Clark rejoined the Army in 1940 and was commissioned in the R.A.S.C. Returning to London Transport, he was subsequently re-titled superintendent (indoor—Central Road Services) in 1950. He has been a member of the stopping places advisory committee of the London and Home Counties Traffic Advisory Committee and for the last five years he has been its vice-chairman.

The Transport Golfing Society (London Area) held a most enjoyable last game of the season at the Royal Wimbledon Golf Club. There was an attendance of 70 members and their guests. The president of the Society, Councillor Norman Harris, presented the first prize to Messrs. W. A. Randall and his guest R. H. Hopper. Second were Messrs. A. Darlow and F. C. Hall and third, Messrs. R. White and R. Slaymaker.

* * *

Sir James Farquharson, general manager, East African Railways and Harbours, last week introduced three new films made by that undertaking—*E.A.R. and H. Magazine, 1959*; *East African Industries—Tea*; and *A Holiday With A Difference*—at the British Council Theatre in London. Loans of copies of these excellent films can be obtained through the East African Office in London or F. C. Pritchard Wood and Partners, Limited, 197 Knightsbridge, S.W.7.

* * *

Mr. P. A. Robinson, A.M.I.Mech.E., who is at present chief engineer of Cumberland Motor Services, Limited, has been appointed with effect from January 1, 1961, chief engineer of the Thames Valley Traction Co., Limited, and its underlying companies, Newbury and District Motor Services, Limited, and South Midland Motor Services, Limited. Mr. Robinson started his career in 1941 with Leyland Motors, Limited. In 1947 he went to the Central works of the Birmingham and Midland Motor Omnibus Co., Limited, and in 1949 was appointed an executive assistant in the works manager's office of London Transport. He was appointed assistant chief engineer of United Automobile Services, Limited, in 1951 and became chief engineer of Cumberland Motor Services in 1956.

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CLASSIFIED ADVERTISEMENTS should be addressed to THE MANAGER, Classified Advertisements, MODERN TRANSPORT, Russell Court, 3-16 Woburn Place, London, W.C.1.

RATES.—The minimum charge for classified advertisements is 7s. for 14 words or less, and 6d. for each additional word. The name and address of the advertiser is charged at the same rate. If a box number is used 2s. extra is charged to cover our name and address and postage. If set in paragraph form each paragraph is estimated separately. Official Notices and semi-display in the classified columns are charged at the rate of 40s. per single column inch.

GARAGES FOR SALE

WE have been instructed to sell separate garages, North Kent and S.E. London. Prices £25,000 to £40,000. 90,000 to 250,000 g.p.a. Apply Robt. J. Lang, Limited, 8 Thomas Street, Woolwich, S.E.18. WOO 6787/8/9.

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ENGINEERING graduate preferred; minimum of two years' engineering training essential.

Require two years' varied railroad engineering service, or five years in direct charge of track crews. Will supervise 135 men maintaining 45-mile railroad, assign work, order materials, be responsible for safety, make regular detailed inspections of roadbed and all track on main line, sidings and yards, bridges, tunnels, etc. Will make engineering calculations relating to maintenance and use of structure and equipment. Must speak Spanish. Married or single candidates acceptable.

Excellent opportunity large copper company, Chile, South America. Two-year contract with transportation both ways for you and family. Base salary $525.00 to $650.00 per month depending upon age and experience of applicant. Box No. 3846, MODERN TRANSPORT, 3-16 Woburn Place, W.C.1.

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LLANELLY 4302

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BERmondsey 4533

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CARDIFF 21631

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SWANSEA 54171/5

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CITY 3381

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CENTRAL 6386

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NOTTINGHAM 83481

IMPORTANT CONTRACTS

More Diesels for British Railways

ORDERS have been placed by the British Transport Commission with Beyer Peacock (Hymek), Limited, for a further 50 diesel-hydraulic main-line locomotives and with the English Electric Co., Limited, for another 98 diesel-electric equipments for shunting locomotives. All the main-line locomotives and 41 of the shunters are for the Western Region, the London Midland Region will have 40 of the remaining shunting locomotives, the Eastern Region seven, the Scottish Region four and the Southern Region six. The total value of the orders is about £5½ million. The 50 main-line locomotives, which will have 1,700 h.p. Maybach MD870 diesel engines and Mekydro hydraulic transmissions, extend an earlier order for 45 of similar type and are required for further stages of Western Region replacement of 1,100 steam by 500 diesel locomotives. Delivery of the 95 Hymek locomotives will start next year and be completed in 1963. The 98 English Electric power equipments comprise 350-h.p. diesel engines, generators and traction motors for shunting engines, of which 63 will be built at railway workshops at Horwich and 35 at Darlington. They will bring British Railways diesel shunting fleet to about 1,600 locomotives, of which some 1,150 are of the 350-h.p. type.

Pakistan Orders I.H. Tractors

An order for British-built crawler tractors worth half a million pounds sterling has been received from the Government of Pakistan by International Harvester Co. of Great Britain, Limited. The contract covers 50 International BTD20 tractors, which are powered by Rolls-Royce 124-h.p. diesel engines, similar to 22 supplied to the Pakistan Government only a few months ago.

Southern Region Contracts

The Southern Region of British Railways has placed the following contracts:

Sir William Arrol and Co., Limited, Glasgow, for repairs to outer dock gate at Dover Train Ferry Dock.

Cleveland Bridge and Engineering Co., Limited, London, S.W.1, for reconstruction of Queenstown Road Bridge, Battersea Park.

Joseph Westwood and Co., Limited, London, E.14, for reconstruction of Telham Hill Bridge, Battle.

Turnerised Roofing Co., Limited, London, S.E.11, for repairs to goods shed at Brighton.

Large U.S. Turboprop Order

A $25,153,000 contract for turboprop aircraft engines has been awarded to Allison Division of General Motors Corporation by the Air Material Command Aeronautical Systems Centre at Wright-Patterson Air Force Base. The contract covers T56A7 engines for the U.S.A.F. combat-cargo transport, the Lockheed C130, and also T56A10W engines for a Navy anti-submarine warfare aircraft, the Lockheed P3V1.

South Mimms By-pass

Tarmac Civil Engineering, Limited, has been awarded the contract for the construction of the South Mimms by-pass, by the Middlesex County Council. The contract is worth approximately £320,000. The proposed new road will extend for 1¼ miles to the west of the existing A6 route through South Mimms. A 24-ft. dual carriageway is planned linking the Ridgehill contract at present being carried out by Tarmac, and the Barnet by-pass contract.

Vickers-Armstrongs—Clearing Agreement

Vickers-Armstrongs (Engineers), Limited, has been manufacturing large mechanical and hydraulic presses at its Newcastle works since 1946 to the designs of the Clearing Division of United States Industries; as a result of an extension to the earlier agreement, which has just been concluded, the company's Crayford works is now to manufacture a range of Clearing open-backed inclinable Torc Pac presses of 22-ton, 32-ton and 45-ton capacity. The sale in the United Kingdom of Clearing presses manufactured by the Vickers-Armstrongs company is handled by the Rockwell Machine Tool Co., Limited.

ROAD RESEARCH

(*Continued from page* 13)

many specialist committees. This eminent body of advisers is composed of men chosen for their specialist knowledge in every field affecting the road, the vehicle and the road user. The chairman of the board is a distinguished engineer with an important place amongst civil engineering contractors, and amongst the members of the board and its committees are to be found the chief engineer of the Ministry of Transport, and several of his senior staff. There are also county and city surveyors, chief constables and economists, professors of engineering, automobile engineers, plant and road vehicle manufacturers and operators, public lighting specialists and many others. Joined with them on the board and the committees are senior administrative and professional civil servants representing the dozen or so Government departments who are concerned with road or runway problems.

Moreover, one of the features of the conduct of road research is the close contact and co-operation that is maintained with industry and with all the many bodies interested in highways, the traffic on them and road safety. In this way the research is kept in intimate touch with reality.

It remains only for me to point out that the construction of this unique track was the responsibility of the Ministry of Works. I suppose if you or I were to build a new house for ourselves with features not to be found in any existing building we should have to have long consultations with the architect and the builder, during which the final designs were hammered out. Well, we have had such consultations with the architects and engineers of the Ministry of Works and here today you see the results of that collaboration. I would like to take this opportunity of saying a word of appreciation of the enthusiastic help we have had from the officers of the Ministry in getting this great track built to satisfy our sometimes exacting needs—and by the agreed date.

SHIPPING AND SHIPBUILDING

New Southampton Terminal

THE new passenger terminal building at berths 105-106 in Southampton Docks, constructed specially for the use of the new liners *Oriana* and *Canberra* on the Australian service, will be opened on November 29 by Field Marshal Sir William Slim, former Governor-General of Australia and former deputy chairman of the Railway Executive. He will be accompanied by Sir Brian Robertson, chairman of the B.T.C. The terminal will be available, in addition to the new ships, to P. and O. vessels on the Far East service, to cruising liners, and to various others. It comprises a waiting hall with all facilities for passengers, a mezzanine floor with offices, and a covered visitors' enclosure. The *Oriana* is expected to dock at Southampton for the first time on November 16. Her first passengers will be delegates from the Association of British Travel Agents which is to hold its 1960 convention on board the liner in the course of a voyage to Lisbon and back. Her maiden voyage in public service will be from Southampton on December 3.

Birkenhead-Newry Container Service

THE British and Irish Steam Packet Co., Limited, has informed Newry Port Harbour Board that the possibilities of expanding container traffic on its service between Newry and Birkenhead are being examined. The Northern Ireland Ministry of Commerce has also given approval to construction of a new wharf at Albert Basin, Newry.

Tiller Pilot Steering

ABSENCE of the traditional wheel on the bridge and the substitution of a compact Sperry tiller pilot as part of a carefully planned and comprehensive instrument console earmarks the new Holland-Amerika Line cargo m.v. *Gaasterdijk* (10,000 tons d.w.) as being among the most advanced of her class. Holland-Amerika chose the tiller pilot as the sole means of steering following successful combined experience of similar equipment installed in *Schiedijk*, *Soestdijk* and *Rotterdam*. A standard Mark E1 gyro compass, located away from the wheelhouse in this instance, provides the heading reference. An essential quality of the tiller pilot is the "follow-up" steering. The quartermaster simply moves the tiller port or starboard in the natural sense, tiller movement always being directly related to rudder angle.

Fresh Records by Port of London

BOTH the tonnage of ships and the tonnage of goods passing through the port of London in the year ended March 31, 1960, surpassed the previous records. The tonnage of shipping using the dock premises and the tonnage of exports handled during the year were record figures also. The net tonnage of ships entering and leaving the port during the year amounted to 89,190,745—8,700,000 tons more than in the previous year—while shipping using dock premises amounted to 37,767,362 tons, an increase of nearly two million tons. The amount of goods passing through the port was 57,143,419 tons, which was over five million tons more than in the previous year.

There was a substantial increase, amounting to nearly 6,950,000 tons in petroleum traffic, although this was partially offset by a further reduction in coal traffic to the extent of over 2,970,000 tons. The tonnage of goods warehoused by the P.L.A. was no less than 29 per cent greater than in the previous year, but the growing tendency for goods to remain in warehouses for shorter periods than previously brought about a further decline of 8 per cent in the stock of goods in the authority's direct charge at the end of the year compared with previously.

Results of Tally Clerks' Strikes

GIVING evidence at the inquiry which opened last week on the tally clerks' dispute in the London docks, Mr. M. R. Haddock, general manager of the National Dock Labour Board, said that for many years tally clerks in London had "sought to maintain a special position" obtaining for themselves a high level of employment. This was a source of difficulty in administering the dock labour scheme. Mr. G. E. Tonge, chairman of the London Dock Labour Board, said that their earnings for the quarter ended July 2 averaged £19 10s. 6d. against average earnings for all workers in the port of London of £18 13s. 10d. "They are among the highest paid workers in the industry."

Speaking as chairman of the National Association of Port Employers, Mr. A. J. M. Crichton said that in the last five years "1,660 men, or little more than 2 per cent of the registered dock labour force, have accounted for the appalling proportion of nearly 60 per cent of all the time lost in the docks by direct industrial dispute." One tally clerk on strike immobilised roughly 10 other dock workers. Roughly, using the multiple of 10, it was found that the number of man-days lost by registered men through unofficial action by tally clerks in five years amounted to 441,727.

FINANCIAL RESULTS

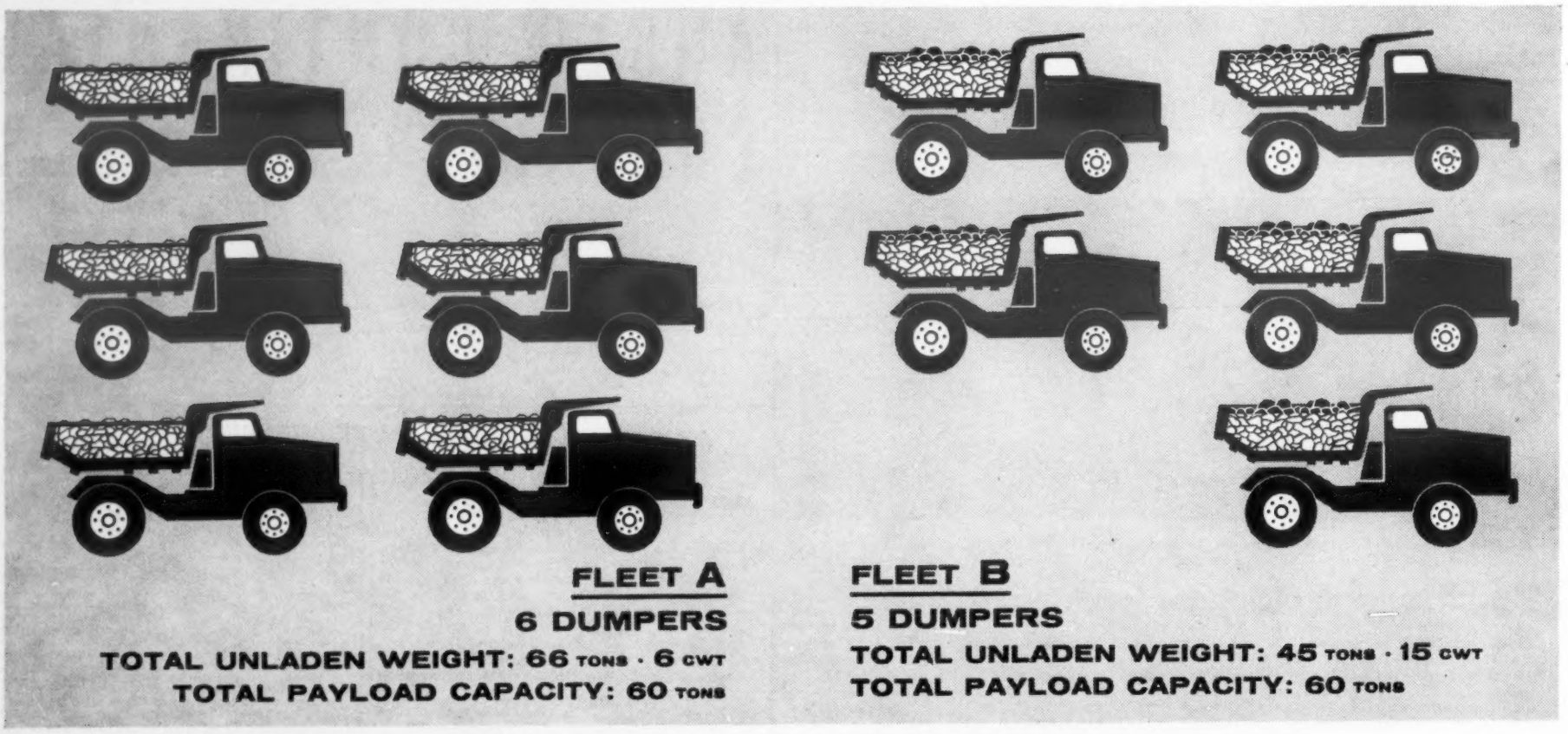
NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganisations

Spurling Motor Bodies

Spurling Motor Bodies, Limited, has had a record year. Profits for the year to May 31 expanded to a new peak of £255,493 (£138,370) before tax. A final dividend of 7½ per cent, as forecast, makes a total of 12½ per cent on capital increased by a one-for-one scrip and one-for-three rights issue, an effective increase of 2½ per cent.

Transport Development Group

The board of Transport Development Group, Limited, announces that offers involving £630,000 are being made for the preference shares of Bristol Industries, Limited (it already owns all the ordinary capital), on the following basis: One 6 per cent £1 second preference share of Transport Development and 5s. 9d. cash for each Bristol 8 per cent £1 preference and one 6 per cent £1 second preference share of Transport Development for each 6 per cent £1 preference of Bristol.


FLEET A
6 DUMPERS
TOTAL UNLADEN WEIGHT: 66 TONS · 6 CWT
TOTAL PAYLOAD CAPACITY: 60 TONS
FLEET B
5 DUMPERS
TOTAL UNLADEN WEIGHT: 45 TONS · 15 CWT
TOTAL PAYLOAD CAPACITY: 60 TONS

How?

The aluminium fleet, with *one less* dumper, and using lighter vehicles, carries the *same* payload as the steel fleet. How?

An aluminium body is only half the weight of a comparable steel body. What it saves you in weight you can take on in payload.

The aluminium bodies—above right—are *20% bigger* than the steel bodies at left—yet they are each nearly *two tons lighter*.

So, because the aluminium bodies are bigger you can carry about 2 extra cu. yards of payload without investing in a heavier chassis.

That's only the beginning of your savings . . .

With aluminium dumpers, you need about one vehicle less for every six steel dumpers you now operate. That's one vehicle less tying up your capital. One driver less on your payroll. One vehicle less to be insured and taxed, fuelled and maintained. One vehicle less when you're working in the crowded conditions of a restricted site.

Because they're lighter, these dumpers use a great deal less fuel and tyres too when empty. In addition, rust can never weaken an aluminium body. Aluminium doesn't rust.

True, an aluminium dumper costs more initially, but, for all these reasons, you soon get your money back several times over.

Why not look into it more fully? **Write to Alcan (U.K.) Limited, 30 Berkeley Square, London, W.1. Telephone: Mayfair 9721.**

ALCAN ALUMINIUM

Britain's most widely used aluminium

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